SPECIAL STUDY ON ECONOMIC CHANGE

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

NINETY-FIFTH CONGRESS

SECOND SESSION

PART 3

JUNE 15, 16, 20, 21, AND 22, 1978

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SPECIAL STUDY ON ECONOMIC CHANGE

THURSDAY, JUNE 15, 1978

MANPOWER IN THE COMING DECADE: SOME OVERVIEWS

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 345, Cannon House Office Building, Hon. Richard Bolling (chairman of the committee) presiding.

Present: Representative Bolling.

Committee staff present: Louis C. Krauthoff II, assistant director; Mark Borchelt, administrative assistant; and M. Catherine Miller, minority professional staff member.

Special Study on Economic Change staff present: Charles S. Sheldon II, research director; Robert Ash Wallace, research director; Richard D. Bartel, staff economist; Paula J. Dobriansky, research assistant; and A. A. "Chip" Sayers, research assistant.

Also present: Everett M. Kassalow, Congressional Research Service, Library of Congress.

Mr. SHELDON [presiding]. We are going to begin the panel meeting this morning. Chairman Bolling telephoned a few minutes ago that he has an emergency at the House Rules Committee and he will be joining us as soon as he can get away. Of course, as soon as another member appears, I will surrender the Chair gladly, but we do try to start as close to on time as we can, so we will go ahead this morning.

This, in effect, is the culmination of a part of the panel meetings which we have had for the last several days related largely to questions of labor supply and employment, unemployment, all the ramifications of those things. We have invited as participants today two people whom we felt were of fitting quality to help pull together the kinds of issues which we have been talking about and to give us a chance to wrap up this section before the committee moves onto related issues in inflation, capital formation, and other matters.

The first of the participants this morning is Mr. Eli Ginzberg, Chairman of the National Commission on Manpower Policy since its establishment in 1974.

From 1962 until 1973, he was Chairman of the National Manpower Advisory Committee under MDTA. He has been a consultant to the last 13 administrations and 8 Presidents on manpower and human resources problems, including the Departments of State, Defense, Labor, Commerce, HEW, and the GAO.

He is the A. Barton Hepburn Professor of Economics at the Graduate School of Business, Columbia University, and director of the conservation of human resources project.

Mr. Ginzberg, what we are telling all of our invited guests is that we would like them to proceed as they will, with the hope that the opening round of remarks will be on the order of 15 minutes or so, which is less than I know any participant would prefer in terms of his knowledge. We would like to have as much time as possible for an ensuing discussion among all the people at the table, including the two participants with each other. Please proceed.

STATEMENT OF HON. ELI GINZBERG, CHAIRMAN, NATIONAL COMMISSION FOR MANPOWER POLICY

Mr. GINZBERG. Fifteen minutes is plenty of time.

Let me try to share with you some advantages of my gray hair and long exposure by looking back in order to establish a base from which to look forward, because I understand your committee is really concerned with the future structure of manpower policy and programs, but we have to look back quickly and these are the points that struck me as I prepared my notes.

No. 1 is that manpower programing in the Federal Government in any considerable scale is a relatively new story. It wasn't really until the present administration that any administration put a lot of money into manpower, and they did that in this administration as part of the economic stimulus package. However, cumulative expenditures on employment and training programs have been estimated at about $70 billion since 1962. That is a sizable amount cumulatively.

The most important point I want to make is that it has had relatively little to do with manpower training. In my point of view, a large part of that sum was primarily for, let us say, work experience, summer youth programs, primarily income transfer money; not exclusively, but primarily.

The next point is that we have been rather slow until the present year to do very much on direct job creation through the Federal Government. But now we have 725,000—or a little bit more—PSE jobs. To keep that in perspective, PSE is less than 1 percent of the jobs in the United States at the present time. So we know that though you have a big program for PSE, it really represents a relatively small part of the total job picture.

The next point I want to make is that the Federal Government, in my opinion, has not been linked in with the private sector to any considerable extent throughout the 16 years of these manpower programs, with the exception of 2 years, 1968 and 1969, when the NABS program was initiated primarily by the White House.

That has been, in my opinion, a major fault of the programs. While I do not believe that it is true to say that five out of six jobs are in the private sector, nevertheless, the private sector is the place in which a large number of people have to finally find jobs. And if the private sector plays only a tangential role in the manpower programs, they cannot be effective. It will mean that the Government is spinning its wheels, putting money out and giving people temporary employment and not linking them into the economy in any permanent fashion.

The next point is that despite the fact of the $70 billion cumulative expenditure, the Congress and DOL have been inadequately informed

about what is happening out there, especially since 1975, when we decentralized it under CETA. And I will make a strong statement to the effect that a Federal-State-local system, if it is to be a responsible system and if the Congress is to exercise its oversight responsibilities, must have a better information system than it now has.

I testified earlier this year before the House Government Operations Committee on this point extensively.

The last general point by way of background is that in addition to these Federal dollars going out for manpower programing, it is important to realize that this year's budget, the fiscal 1979 budget, carries approximately $215 billion of income transfer money. While I have never really done the calculations, but just to round out my own figures, I would say State and local government outlays are about another $60 billion; to give a nice round figure of $300 billion of income transfer money. I estimate that there is another $200 billion of illicit, illegal, and off-the-books money floating around and that is $500 billion or one-half of a trillion dollars. This is another way of saying that jobs are not the only way that people get income in the United States these days. Therefore, one has to think not only of jobs, but what kind of jobs are available, because some people have real alternatives.

What does that all mean for the future?

The Commission, in its third annual report, argues very strongly that the manpower programs of the Federal Government ought to be targeted much more on the structurally unemployed because at the present time those who are eligible for CETA programs add up to approximately 25 million people. With the amount of money the Government has in these programs, it permits entirely too much creaming and, therefore, really does not get the effectiveness it would if it were more tightly structured.

The next point I want to make is that the Commission, in "Job Creation Through Public Service Employment," which it submitted to the Congress in March, took a critical view of PSE. And while it came out with more optimistic findings than a lot of people thought about the fact that fiscal substitution was not as big a figure as many people believed, based upon the findings or the Brookings Institution; nevertheless, the Commission continues to be somewhat wary about a still larger PSE program. We really do not believe that it has yet proved to be a good transitional device to get people into permanent employment. So if we concentrate on the structural employment, there must be a big training component put into it and a real transition effort made. Otherwise you do not get much use other than an income transfer affair.

And we have strong recommendations about the kinds of criteria that ought to govern the PSE. We see it primarily as a program that ought to be directed to the structurally unemployed.

This year, in our fourth annual report, we are concentrating on the question of how these manpower moneys could conceivably be used via tax devices, wage subsidies, et cetera, to obtain a larger degree of private sector involvement.

We are looking to the private sector to see whether it can be brought into much more active participation. In that connection we are con-

templating a conference with the Business Roundtable, the Chamber of Commerce, and the National Manufacturers' Association in early November to further explore what can be the lines of interrelationship between the private and public sectors.

The Commission has never really explored this problem in detail. It has at least surfaced the potential of saying maybe there is an entirely different way to get an employment effect from Federal spending, and that is to move to what I would call substantive programs with output objectives such as trying to move on new energy or trying to maybe expand the health system. I do not know, but nevertheless, taking substantive programs and insisting that the contractors take a certain number of structurally unemployed off the rolls as a price for getting the contract.

We have a new monograph, by Prof. Melvin Reder, of the University of Chicago, which raises some issues in and around the question of how the Government might facilitate with the private sector the expansion of good jobs in the economy. I will make that available to the committee as soon as it becomes available.

The Commission is concerned with the youth employment problem. We have a task force chaired by Mr. John Porter and we will have some recommendations in 1979 directed at setting out a little bit more carefully what it is that can be done to facilitate the transition, not of all youth, because I think most can make the transition, but the minority of the youth who are poorly prepared or who are in dysfunctional labor markets.

The Commission will also have a major conference in collaboration with the U.S. Department of Labor on the employment impact of trade policies. We believe that the unhappiness that many of the trade unions are constantly verbalizing, that our trade policy is not sensitive enough to its employment effect, is surely a subject worthwhole considering. We are working out a joint conference on that.

We are concerned all the time about the better integration of macroeconomic and manpower policies. We recommended in our second annual report to the Congress that the Joint Economic Committee consider joint hearings on the Employment and Training Report of the President, the Economic Report of the President, and our annual report to the President and the Congress. We also suggested to the Department of Labor that it turn its Employment and Training Report of the President into a policy document. If you had that report and ours, together with the Council of Economic Advisers, that would permit, I think, an effective joint consideration of the macroeconomic and manpower policies.

We are running an international employment policies conference, under the funding from the German Marshall Fund, this July. This is the second conference. We had a first one, 2 years ago in Europe. In this conference, we are asking key manpower and Treasury personnel and some academics from the OECD countries to come and discuss with us their experiences with the integration of manpower and macroeconomic policies and related matters, including the question of the involvement in the private sector in manpower.

So we have a full plate before us. We have submitted two reports to the Congress this spring and we will have a whole series of additional reports during the course of the year.

[The prepared statement of Mr. Ginzberg follows:]

PREPARED STATEMENT OF HON. ELI GINZBERG

Manpower Institutions and Policy: What Changes Are Needed?

1. For the purposes of discussion, I am setting forth strong positions to indicate the major shortcomings of existing institutions and policies in order to point directions where desirable changes should be considered.

2. I start by setting out my understanding of our present difficulties:

(*a*) We have found macro-policies inadequate (because of inflationary pressures etc.) to make jobs available for all who want to work (at existing wages).

(*b*) Manpower policies and programs have contributed relatively little to job creation except for the current PSE program which accounts for .8 of 1 percent of all jobs.

(*c*) Manpower programs have made some, how much is unclear, contribution to improving the employability of the structurally unemployed (S.U.).

(*d*) The major accomplishment of manpower programs to date—circa $70 billion expenditures since 1962—has been income transfer to families in the lower but not necessarily in the lowest brackets.

(*e*) There is no objective way to judge the effectiveness of CETA because of the absence of a basic management information system. Such evidence as exists suggests that programs vary all over the lot from quite good to very poor.

(*f*) There has been very little effective coordination between manpower, education, and income transfer programs as well as other federal programs at federal, state and local levels. WIN is one exception and the results are equivocal.

(*g*) With relatively few exceptions it has been difficult for all levels of government to engage the active participation of the private sector (business and labor) in participating actively in planning and implementing manpower programs.

(*h*) The most serious manpower problems are centered in declining urban and rural areas and impact most severely on members of minority groups and other persons who lack education and skills.

(*i*) The inability of schools to prepare many oung people (particularly those from minority groups) to meet minimum requirements for employment—effective literacy etc.—is an important factor in these young people's differentially high unemployment.

(*j*) The high propensity of women outside the labor force to enter when jobs become available makes it difficult for even a large incerase in jobs—9 million since 1975—to be reflected in a rapid absorption of the unemployed. In this period unemployment declined by 3 million for a ratio of 3:1.

(*k*) The availability of about $300 billion of income transfer money (federal, state, and local) and another $200 billion from illicit, illegal, and off-the-book, activities creates alternatives for many to reject poor jobs that hold no promise of leading anywhere.

3. The foregoing list of difficulties and unsolved problems in the manpower arena which impact policy and institutions could be further extended without difficulty but it suffices as a backdrop for setting forth directions for policy and institutional changes. As to policy arenas, I stress the following:

(*a*) The National Commission for Manpower Policy (NCMP) sees the need for greater consensus among the public and in Congress as to the potentialities and limits of manpower policy—what can be expected from it and which groups should receive priority attention. The NCMP in its Interim Report on PSE 3/78 and its Third Annual Report (in press) places increasing stress on manpower policy being used to enhance the employability of the S.U. The above requires much more targeting than has been the case in the past.

(*b*) The NCMP is wary about increasing PSE above the present 725,000 level. Moreover, it sees a need for a significant training component for most PSE enrollees if they are to be assisted to move into regular jobs.

(*c*) The NCMP has identified but not yet explored in detail a radically different approach of using public employment to help the S.U. by expanding desirable public expenditure programs from health to energy and specifying that contractors hire a stipulated proportion of the S.U.

(*d*) The NCMP is focusing its current year's work preparatory to submitting its 14th Annual Report in December, 1978, on tax, subsidy, and related devices which might result in a greater willingness of the private sector to accept for training and employment larger numbers of S.U. persons.

(*e*) While the NCMP has expressed itself (Interim PSE Report) in broad agreement with the Administration's proposal to provide an employment opportunity for every household on welfare with an employable member, it believes that the demonstrations must be carefully monitored to learn how large a public job effort can be launched and maintained alongside the regular economy.

(*f*) The NCMP has recently established under the leadership of Dr. John Porter, with four additional public members assisting him, a Task Force on Youths with Employment Difficulties. The Commission is of the opinion that a much closer integration must take place between educational and manpower programs if the horrendously high unemployment rates particularly among low income minority youth are to be brought down and these young people afforded an opportunity to move from school into training and employment without disappearing between the cracks.

(*g*) The NCMP, in cooperation with the U.S. Department of Labor is planning a conference this fall on the "Employment Impacts of Trade Policy." In the view of NCMP the U.S. must take a closer look at how trade policy among developed and developing nations is linked to their desires to keep domestic employment high and the implications thereof for U.S. policy both with respect to trade and adjustment mechanisms.

(*h*) The NCMP is currently in the planning stage of a conference that will explore how changes in work time—daily, weekly, monthly, annually and over the life cycle might be used constructively to bring about a better balance between the demand and supply of job seekers and work or at a minimum result in a less unequal sharing of the costs of unemployment.

(*i*) It would be my hope and expectation that now that the Administration has outlined its urban policy that the NCMP will before long address the policy issues that are linked to the spatial dimensions of economic growth and the distribution of the working population.

4. The foregoing is a suggestive rather than inclusive listing of critical areas where the interfacing of manpower with other federal policies must be more carefully explored and assessed. With respect to the strengthening of existing or the establishment of new manpower institutions the following is offered as indicative of the NMP's current thinking:

(*a*) The NCMP recommended in its 2nd Annual Report that the JEC consider holding regular hearings at the beginning of each calendar year on the Economic Report of the President in the context of the NCMP annual report and the President's Report on Manpower if it were transformed into a policy document so that macro- and manpower policies could be better dovetailed.

(*b*) The NCMP in its last 3 reports—2nd Annual, PSE Interim, and 3rd Annual has placed major stress on an improved management information system without which the federal government will remain at sea in efforts to assess the effectiveness of its CETA program that commands about $12 billion of annual appropriations.

(*c*) The NCMP is organizing a conference for early November 1978 with representative leaders of the business community to explore ways in which employer groups can play a more active role in the implementation of manpower programs. It has held and will continue to hold similar meetings with labor and CBO's with similar objectives in view. The NCMP is concerned that the more active participation of these non-governmental groups is essential if a larger number and proportion of the S.U. are to be assisted into regular employment.

(*d*) The NCMP is looking to its Task Force on Youth with Employment Difficulties to report on policy and implementation by the fall of 1979.

(*e*) The NCMP has work under way on problems of "Coordination" which includes such institutional concerns as the relations of Wagner-Peyser to manpower policy, strengthened relations among the federal agencies with a concern with manpower, improved linkages among the three levels of government, etc.

5. Concluding observations:

(*a*) Until the stimulus package of 1977 manpower commanded relatively small amounts of federal funding.

(*b*) at present levels of funding it is essential that both the Administration and the Congress—as well as bodies such as NCMP—address the many complex and unsolved policy and institutional questions, some of which have been identified above.

(*c*) It is my personal view (see "The Job Problem," Scientific American, November 1977) that there is little likelihood of the U.S. economy providing jobs

in the near future for all of the estimated more than 20 million persons (not 6 million) who overhang the labor market.

(*d*) Accordingly a major challenge to manpower policy is to determine what groups should receive priority attention and help. The NCMP has centered on two: the S.U. and Youth with Employment Difficulties.

(*e*) It is essential that the Congress and the Adminisrtation continue to pay primary atention to the strengthening of macro policy (including the slowing of inflation) for at best manpower policy and programs can only deal effectively with marginal groups.

Mr. SHELDON. Thank you very much, Mr. Ginzberg. We will proceed to a discussion after we have first heard from our second panelist, Mr. Leveson, who took his Ph. D. at Columbia University. He is on the senior professional staff of the Hudson Institute. He has been there since 1974.

Previously, he was at the Office of Health Systems Planning for the New York City Health Services Administration. That was 1971 to 1973.

He was also director of research for the Office of Comprehensive Planning of the New York City Planning Commission, 1969 to 1971.

His experience includes 4 years at the National Bureau of Economic Research and he was there studying productivity in the service industries. He had a year with the Rand Corp., and 2 years in the research department of the ILGWU.

He has recently completed a study on the future of the United States and is regent for the EDA.

Go ahead, Mr. Leveson.

STATEMENT OF IRVING LEVESON, MEMBER, SENIOR PROFESSIONAL STAFF, HUDSON INSTITUTE, INC., CROTON-ON-HUDSON, N.Y.

Mr. LEVESON. Thank you, Mr. Sheldon. I think my remarks will be even briefer. I would like to bank a little of that time to comment later on what I believe are some particularly critical manpower trends which ought to be examined by this committee.

My main thesis today is that during the last decade the service industries have been entering a period of unprecedented innovation and productivity change.

There have been three principal reasons for interest in the service industries in the past. One has been in regard to the formulation of Federal statistical policy. There have been particularly serious problems of measurement of output, prices, self-employment, and so on, in services, and economists have been concerned about these issues in connection with the development of the National Income and Product accounts.

Second, there has been strong interest in the service industries because of concerns that if service industries grow slowly, that might exert a substantial drag on national economic growth.

Finally, there has been an interest from the point of view what the nature of society might be—the possible role of service industries in what has been referred to as an emerging postindustrial society.

The kinds of changes which are taking place in the service industries have important implications for all three areas, statistical policy, the role of economic growth, and the emerging nature of society.

The traditional view of service industries was of a lagging sector, not characterized by much innovation and productivity change. More efficient methods which did develop tended to be used in the goods-producing sector. To some extent this view is correct. It has been exaggerated because of problems of measurement which I alluded to.

Recently there has been a very dramatic change in the evolution of service production. Historically a major source of productivity improvement in service industries was shifts toward self-service. Wage rates in service industries had to keep pace with the wage rates offered in goods-producing industries in which productivity was rapidly rising. The price of services tended to become increasingly costly and, as a result, the amount of service offered declined. The most dramatic example is the decrease in the prevalence of private household workers since the turn of the century. There are many others. The shift to department stores and the shift to supermarkets; the growth of fast-food restaurants and the recent rapid growth of self-service gasoline stations are further examples of the shift to self-service in response to the increasing costs of providing services as wage rates kept rising with little productivity change.

Specific technological changes also contributed to service industry productivity growth. But these were not the kinds of large-scale changes that we saw in other industries.

Recently there has been a very major change in that pattern. We have seen the explosion in the use of computers, the more general development of information technology, rapid advances in the banking industry; for example, with growth now of teller machines and the great prospects for electronic funds transfer, electronic mail systems, evolution of a national stock exchange; the development of central check clearing processes, and many other major technological changes.

We also see a movement toward increasing amenities: a shift from fast-food to family food restaurants; department stores evolving into shopping centers, which offer proximity to other stores; parking, indoor malls with air-conditioning and art work; all sorts of amenities.

There has been a tremendous explosion in diagnostic capabilities in the health sector, with improved technologies for laboratory and X-ray.

Finance, insurance, real estate, wholesale and retail trade and health services together account for one-third of the economy. What is happening is that the non-Government portion of the service industries have been entering an era in which rather than shifting away from amenities—which I think in some areas is continuing and will continue—the price of producing additional service, appropriately measured, has been falling relative to other prices rather than rising.

We have finally learned how to mass produce amenities because of technological changes, and because of increases in our ability to handle human service problems. The example of McDonald's illustrates what Theodore Levitt has referred to as the "industrialization of service." Both the ability to handle human service problems better and tech-

nology changes in the rest of the economy have made a major difference in the ability to produce services, and we have now begun to move in the direction of greater amenities rather than less.

This is a trend I see as likely to continue for an indefinite period of time. This trend has a number of potentially significant implications. One is that it means that we are tending to underestimate the amount of economic growth because many increases in service are not counted. I would not recommend on the basis of this that we spend a lot of money trying to develop new output measures, but that we think differently about the kind of information we have.

It does have important implications, though, for statistical policy with regard to prices, because there I think we can do some things more effectively, and we are overstating the amount of price inflation as a result of failing to take into account these changes.

Since 1965, in spite of what I believe is a rapid real increase in productivity in service industries, the GNP deflator for non-Government services rose substantially faster than the deflator for goods-producing industries. What happens, of course, is that nominal price changes of this sort tend to get multiplied through cost-of-living adjustments and markup pricing arrangements, and can have an impact on the inflation rate in the overall economy. So that is one area to improve our measurements.

Second, we should be aware of the fact that economic growth will be somewhat better than it looks because of increases in the amenities. Improved service productivity, incidentally, may make more apparent differences in efficiency noticed by the public between the Government and other parts of the service sector. This may increase pressures to improve Government efficiency.

Finally, while I do not know what postindustrial society is, I think if we do continue to move in a direction of greater amenities in the services, we may well begin to see an economy in which services can be mass produced relatively cheaper as an important characteristic of what that society will become. Thank you.

[The prepared statement of Mr. Leveson follows:]

PREPARED STATEMENT OF IRVING LEVESON

The Service Economy: Entering a New Era

Interest in the service industries among students of economic growth has derived primarily from three concerns:

(1) the special problems of measuring output and productivity;

(2) the possibility that the service sector will exert a substantial drag on national productivity growth; and

(3) the role of services in the evolving nature of society.

Over the years a picture has been maintained of services as a stagnant, residual, or lagging sector, often untouched by major innovation and technical advance, and yet in which a rapidly growing share of persons earn their livelihood. This picture has always been somewhat exaggerated, but there have been substantial differences in progress between goods and services. In the last decade, there is every indication of a major change. The service industries in the United States have entered a new phase, and the traditional view no longer accurately describes the developments which have been taking place.

Nonfarm goods-producing industries have increased their gross product at a rate almost as fast as the increase in output of services. The tendency for service industries in the United States to grow in output only slightly faster than nonfarm goods-producing industries is the result of two opposing forces. The demand for services tends to rise more rapidly than the demand for goods with increas-

ing income, education, and leisure. But the slower productivity growth in the service industries means that prices rise more rapidly than those in goods-producing industries. This discourages consumption of services, offsetting some of the rise in output which affluence and other changes would generate. The difference between sectors in the impact of rising incomes may not be large even without offsetting price effects.[1] In any case, actual difference between sectors in rates of real output growth are small and the more rapid growth in service employment is accounted for almost entirely by smaller increases in productivity.

Confidence in this traditional picture has always been qualified by respect for biases in the measurement of service output and productivity. But these biases have been seen as operating in both directions and, while having some effects on overall measures, are typically not thought to affect the basic conclusions. The problems of output measurement are considered particularly great in Government and other not-for-profit organizations where production is measured by employment or man-hours and productivity change is assumed to be zero. But the problems are much more pervasive. Retailing output is based on gross margins, a measure of input, and the deflators are based on the prices of the products sold rather than the retailing service provided.[2] The Consumer Price Index treats some changes in product quality as increases in price.[3] This procedure tends to understate the growth of real output when the price indexes are used to deflate expenditures for various services. The problem is notorious in the hospital sector. In the life insurance industry, U.S. output has been based on a deflator which is an average of wages and prices. It has been shown for Canada that the construction of a more appropriate output measure yields vastly greater output and productivity change.[4] In banking the recent shift to use of employment as an output indicator was considered a major improvement because the previous use of constant dollar deposits treated increases in the services provided put dollar of deposit as a decline rather than an increase in productivity.[5] In recognition of these problems various analysts have used such devices as focusing on price differences between goods and services and assuming rates of increase of productivity for not-for-profit industries. These conveniences are of course unsatisfying. The measures used are even more misleading when major changes occur in the relationship of productivity growth in services to productivity growth in other parts of the economy.

There has always been some productivity growth in service industries as a result of technological change. But many advances, such as those in dry cleaning and beauty shops were the result of developments largely confined to one industry. Perhaps the most significant source of productivity change was the shift to self-service—as occurred in the evolution of department stores and supermarkets and more recently with fast food and family food stores and gasoline retailing.

The shift to self-service was an innovation generated very directly by the rise in the cost of providing service. Wages in service industries rose to keep up with the wages offered by goods-producing industries which had substantial productivity advances. As personalized service became more expensive, new forms of distribution developed which economized on labor and substituted the time of the consumer for the time of the employee. This is perhaps most apparent in the rapid decline in employment in domestic service since the turn of the century.[6] The view is still widely held that "the growth of output and productivity in retailing is probably overstated because of a failure to capture a decline in services provided by retailers per constant dollar of goods sold." [7] The shift to self-

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[1] See Victor R. Fuchs, *The Service Economy* (New York: National Bureau of Economic Research, 1968). Estimates vary widely. For example see the results for Australia in B. D. Haig, "An Analysis of Changes in the Distribution of Employment Between the Manufacturing and Service Industries, 1960–1970," *The Review of Economics and Statistics*, 57, No. 1 (February, 1975), pp. 35–42.

[2] U.S. Department of Commerce, Office of Business Economics, "GNP by Major Industries, Concepts and Methods," April, 1966.

[3] *The Price Statistics of the Federal Government*, hearings before the Joint Economic Committee, U.S. Congress, reprinted for the National Bureau of Economic Research (New York: Columbia University Press, 1961).

[4] Ron Hirschhorn and Randall Geehan, "Measuring the Real Output of the Life Insurance Industry," *The Review of Economics and Statistics*, 59, No. 2 (May 1977), pp. 211–219.

[5] In this connection see John Gorman, "Alternative Measures of Real Output and Productivity in Commercial Banks," Victor R. Fuchs, editor, *Production and Productivity in Service Industries*, NBER Conference on Research in Income and Wealth (New York: Columbia University Press, 1969).

[6] George Stigler, *Trends in Employment in the Service Industries* (Princeton: Princeton University Press, 1956).

[7] Victor R. Fuchs, "The Service Industries and U.S. Economic Growth Since World War II," Working Paper No. 211, Stanford, California, National Bureau of Economic Research, November 1977, p. 22.

service has not run its course, but it no longer has the same character, and even more dramatic changes are taking place.

The service industries have been entering a period of unprecedented innovation and productivity change. The once isolated department store is being replaced by large shopping centers with stores located near one another, parking, indoor malls, air conditioning, art work, easily available credit and other conveniences. There have been veritable revolutions in the fast food industry, health services and banking. The growth of fast food and family food restaurants reflects an emerging ability to provide personalized services on a mass basis at low cost. We have made tremendous progress towards solving the problems of human service production through what Theodore Levitt has called the industrialization of service.[8] This is no longer an escape from the high cost of personal service. It is the mass production of personal services at low cost. The low cost stimulates demand and encourages the expansion rather than the contraction of amenities. The health sector has undergone an explosion of technological change. Diagnostic services have become the central focus of medicine because new techniques have so greatly lowered the cost of a laboratory test or an X-ray while computers have begun to make a major contribution toward storing and analyzing the vast data which is obtained. The banking industry has been offering a growing number of locational amenities and an increasing range of services. Real estate offices are increasingly tied in with multiple listing services and national organizations. Computers have been used to greatly simplify the task of searching titles to property. Accountants now routinely use computer services for computation and preparation of tax returns. Law libraries use computers to search cases. Video tapes have been used in ways that could easily revolutionize higher education.[9] In the coming years we can expect an intensification of these forces with the growth of teller machines, computerized cash registers, centralized check clearing, a national securities exchange, electronic mail, and home computer services. In many ways the real computer revolution is just beginning and it will have a far greater impact on the service industries and on the ways they interact with households than was ever anticipated. The role of computers can be seen as one element in the further explosion of information and communications technology.[10]

It should be readily apparent that the service revolution bears little relation to what is included in service industry output and productivity measures. With the shift to self-service, output and productivity were overstated. With growth in amenities, output and productivity may be greatly understated in a wide range of services. The major exceptions are Government and some not-for-profit industries which do not operate under the same incentives and are generally believed to be lagging far behind.

The changes appear in part to result from adaptation of knowledge and techniques first applied in goods-producing industries and in part from new developments. The improvements appear to have been stimulated to a significant degree by the rapidly growing resources devoted to services and the rising gap between sectors in levels of efficiency. While there is no specific evidence in the role of induced innovation in the transfer and development of techniques, observation tends to confirm the theoretical expectation that the larger the divergence between sectors, the greater the changes within services which occur.

The shift from self-service to growth of amenities in a period of extensive innovation, technological change, and productivity increase has a number of important implications. We should expect that employment in the service industries will continue to grow much more rapidly than in goods-producing industries. But that employment growth will now be largely the result of increases in the richness of the output rather than because of lagging efficiency. Nominal measures of output may continue to show approximately the same differential rate of growth between goods and service sectors, but the biases which exclude the increases in amenities will mean that the real growth in output of services relative to goods will be significantly understated. There may no longer be a difference between non-governmental service industries and goods-producing industries in the "real" rate of productivity growth.

It is no longer possible to view the growth of services as a drag on economic growth. Rather, service industries must increasingly be seen in the forefront of

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[8] Theodore Levitt, "The Industrialization of Services," *Harvard Business Review* (September–October, 1976), pp. 63–74.

[9] Joan Bodoff, Irving Leveson and Harold Wattel, *The Effect of Innovation on Productivity in the Service Industries*, Volume 2, Final Report to the National Science Foundation, August 1975.

[10] See Marc Uri Porat, *The Information Economy*, Office of Telecommunications, U.S. Department of Commerce, 1977 (9 Vols.)

innovation and improvements in efficiency. Existing measures of economic growth will not reflect this, and the economy-wide rate of output and productivity growth will be understated.[11] The difference in productivity growth between the profit-seeking portion of the service sector and not-for-profit service industries will be greater than ever. Government will stand out like a sore thumb as the lagging sector in productivity change, as it already has begun to do. And, while the incentive systems are much less powerful, substantial increases in innovation of a similar sort may well occur in government later on.

There is no exact date one can ascribe to the emergence of rapid innovation in the service industries, but it appears to have begun in the mid-to-late 1960s. Another major change in the economy taking place since the mid-1960s is the extraordinarily rapid growth in the labor force. Employment has been growing about 2 percent per year for the last dozen years, about twice its earlier rate. A portion of this rapid growth reflects the inrcease in the labor force of youth born during the baby boom, but the greatest part is in the result of the rapid growth in the labor force participation rate of women. There is much more room for growth in female labor force participation, and no one knows exactly how far it will go.

The rapid rise in the demand for labor at the same time supply was growing so rapidly appears to be substantially the result of a change in a relative price of labor vs. capital-intensive production. Several factors contributed to this change, including the abundant availability of labor itself. At the same time there were also increases in the cost of capital-intensive production associated with the cost of complying with environmental regulations, the rapid rise in energy prices, and the effects of inflation and the way in which it interacts with the tax system. In addition to changes in the cost structure, there have been especially great short term and long term business risks. Labor offers greater flexibility than fixed plant under these conditions. The price and risk effects together appear responsible for much of the shift toward labor.[12]

Fuchs has suggested that the growth of the service sector itself may have made a significant contribution to the demand for female labor because of flexibility in hours of work and frequent location in residential areas.[13] It is also possible that the cost factors associated with the shift toward more labor-intensive production have stimulated consumption of services. It is not clear whether the effects of either of these forces on employment is large in comparison with the impact of slower productivity growth and the expansion of output once amenities could be provided at relatively low cost.

The nature of the changes in the service sector implies an increasing integration between household activities and the private market. The distinctions which have always been blurred are becoming less sharp than ever. This can be seen particularly clearly in the use of leisure time. Small changes in the length of the workweek have been accompanied by major shifts in the way in which free time is used. Vacations, holidays, and joint uses of work and nonwork time are permitting great flexibility.[14] The shift towards service industry employment is responsible for a large part of that increased flexibility.

One useful distinction which has been made is between services provided to businesses and those provided to individuals. The latter, which have been called quaternary services, can be expected to grow especially rapidly with a rise of discretionary income and leisure.[15]

There has been strong interest in the notion of a post-industrial society. Since there are no clear definitions of what that is, perhaps we should view the use of the term as a question about the future of society rather than as an answer. One can view the emergence of an era in which service industries offer rapid innovation and productivity growth and increases in amenities as one characteristic of a society which is affluent and has more leisure, education, and individual choice.

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[11] Irving Leveson and Jane Newitt, *The Future of the U.S. and Its Regions,* Hudson Institute, May 1978.

[12] Irving Leveson, *The Underinvestment Problem,* Research Memorandum #52, Hudson Institute, June 1978.

[13] "The Service Industries and U.S. Economic Growth Since World War II," *op. cit.*

[14] See Alexander Szalai, "The Future of Free Time," *Future* (June 1976), pp. 279–283.

[15] See Jean Gottman, Megalopolis (New York, The Twentieth Century Fund, 1961); and Herman Kahn, William Brown, and Leon Martel, "The Next 200 Years" (New York: William Morrow and Company, Inc., 1976).

Mr. SHELDON. Thank you very much, Mr. Leveson.

Now, we have heard from both of the panelists and we have a chance for the other individuals up here to get into the discussion; and I remind the panelists that they will have the opportunity to comment on each other's remarks.

Mr. Kassalow.

Mr. KASSALOW. Mr. Ginzberg, you indicate that in your own thinking, and I guess within the thinking of the Commission that you have been chairing, there is a tendency or desire to involve the private sector more closely with future Federal manpower training and even job programs.

To begin with, I would like to ask you how successful in the past have those programs been which the Department of Labor established with somewhat the same objective? I am thinking of some of the WIN programs, some of the JOBS programs, and others in which subsidies in one form or tax rebates were offered to private companies in an effort to have them try to absorb part of those who were structurally unemployed.

Mr. GINZBERG. Well, I think that like a lot of things, there is selective evidence over a very wide range and I will bring some of it to bear. I think there is a general feeling from our inadequate evaluation studies that, on the whole, when you could do on-the-job training it was cheaper and better and led to more effective outcomes. Unfortunately, there has been a severe limitation on the amount of OJT, because the labor market went soft, starting in 1970. But surely the late 1960's indicated that OJT was a preferred way to go in tight labor markets.

I would say that if we use the words "private sector" to mean nongovernmental, among the most successful programs that I remember in the 1960's were programs where the training was at least closely geared to employer needs. In the two places that I think the better training took place was in licensed practical nursing programs, where we knew that the hospitals were short of licensed practical nurses; women with limited education and earning capacity were put into a licensed practical nurse training program for a year and they got jobs at the end and the income gains were of 100 percent or more. That was among the most successful training programs I have seen the U.S. Government involved in.

There were successful programs for automobile mechanics. Success occurred where there was serious training over a period of months, plus an absorbative capacity for training people at the end of the period.

The trouble with the NABS experience was that the White House made a deal at that time with the business leadership that nobody had to collect any information or transfer it, so we are really in the dark. I think they kept their own figures on participation. Many of the companies that did participate were not interested in governmental dollars. They did that in response to the President's initiative. Some of the companies took the dollars and not too much happened.

I would say that my general reading would be unequivocally that from 1962 to date the private sector, except for those 2 years, and it took a while for NABS to get going, has never been a full-fledged participant member with the Federal Government.

The Commission ran a conference in October of 1975, to which we invited officers and managers of 25 large corporations. The results of the conference are available in a special report of the Commission in which it is indicated that the private sector representatives, in the fall of 1975, just 6 months out of the trough of the depression, said: "Let the Government take care of the unemployed, let us take care of our own training and employment needs and the two need not meet." That was their stand, and it is true right up to now. I would say that we do not really have a serious cooperative effort of any length of time of a large nature in which the Federal Government went out to play a part with the private sector and see what could be done.

Let me give you one or two illustrations with the Job Corps. The best of the Job Corps programs that I know of were where a couple of unions like the Iron Workers' Union agreed that youngsters who went through the Job Corps and completed their preapprenticeship training would be guaranteed a place in the union's apprenticeship program later on. This is the linkage with governmental moneys, training opportunities and then employment opportunities that are so critically important.

Under PSE, according to the Nathan study at Brookings, there were examples where the success of the PSE program, in terms of transition from PSE, often increased when local and State governments, having had a chance to look over a large pool of the unemployed temporarily in PSE, found good people and put them into their regular payrolls at the end of the project.

I would say that the basic philosophy that I have is that you should have training programs closely linked to extent employment opportunities. It reminds me, before the MDTA was passed I had a session with Secretary Goldberg and I asked, "What do you want to have a training program for unless you have some kind of employment expansion to go along with it?"

He said, "I cannot get it. The White House will only give me the training program."

I said, "As long as we understand each other. The two have to be in some kind of effective relationship with each other."

Mr. KASSALOW. We had some earlier discussion of the same program with someone from a large insurance company who indicated that it was his view, somewhat stating what you have just stated, that large companies would tend to have little or no interest; but he thought there was greater possibility to promote such linkages through tax incentives or training subsidies with smaller companies as devices to stimulate their employing some of the structurally unemployed. Yet, I notice that you give emphasis to what seems like a somewhat different approach of contracting for a service or for a specific function, I should say, as a way of effecting a linkage and a tie-in between Federal manpower policy and job creation problems and the private sector, or could you spell that out to any degree?

Mr. GINZBERG. Let me say first that I do believe that we cannot think about the business sector solely from terms of large companies. On the other hand, I did have an opportunity in May to talk to the business council in its spring meeting in Homestead, and they had the question of youth unemployment on their program. They had only two subjects the dollar and youth unemployment. I think it is fair to say that

they realize now perhaps that it is in the interest of the private sector to play a cooperative role with the Government and with local institutions, including local schools. The need for them to do so is greater than they have recognized partly because they are big contributors to the taxes. Partly, it's because they realize that, unless you want to permanently have a large Federal activity of just constantly moving people on and off the Federal payroll, they have to play a part. But I would agree that middle-size companies have to be brought into this and small companies also.

I personally have some skepticism about the potential of using tax incentives. I do not like to open up the U.S. Treasury loosely, but I do not want to prejudge that. We are going to study that with more detail this year. We have the European conference before us and I surely want to make sure that the staff of the Commission, our Director and our consultants take a good look at that. We will have a special academic panel, under Mr. John Palmer, preparing a set of papers on these issues.

I do not want to preclude it. I would say it is not easy to affect the behavior of employers when it comes to hiring practices through tax incentives, but I am by no means sure we have ever really gotten what I would say is even a somewhat positive stance from the private sector here. And it involves a large amount of local activity, local concern, and local interest. I have just come from a day and a half meeting from one of the largest multinational companies in the United States, and I had said if they are concerned about their home environment, their home base, they have to be worried about a continuing high rate of youth unemployment and they have to play their part. They have to take some reasonable number of these people and give them a chance to make it.

Where this will come out I do not know. We will have to try more than in the past to bring the private sector in.

Mr. KASSALOW. In evaluating the manpower programs to date, and I guess even as those stand today, you suggested in your prepared statement and again orally that to a very great extent they strike you as devices for income transfer rather than manpower development, which was what was title of the original act in 1962. Would this mean that we could more readily and more sensibly turn to income transfer programs? That is maybe a radical extension of what you are saying, but——

Mr. GINZBERG. No, I think there is an alternative. Let me explain why I think they become income transfer programs. The Congress could not appropriate very large sums for manpower until recently, as I emphasized.

In a comparison with Sweden I would say we were appropriating 20 percent on a per capita basis or any kind of a comparable basis of scale to what they were contributing to their manpower services effort. Since we had a relatively small amount of money and since we are a democracy in which Congressmen vote on the basis of doing something for their constituents, they made too many people eligible for the money and, therefore, program operators tried to get people on these rolls for short periods of time and you could not do serious training.

Serious training, especially if you are dealing with structurally unemployed persons, frequently means 9 months, a year, or a year and a half of training. We have not been willing to do that. We thin out our dollars and give a little bit to everybody.

The most serious problems I have is with the summer youth program, which was, you know, to keep the cities from burning down, keep the kids off the streets. I would say it was a dysfunctional program except for giving them money with no job, but in terms of learning to work, they learned you could get money without working. Without supervision, in many cases, there was no serious attempt to teach anything. So they got a dysfunctional view of the nature of work, so I would say we have in general but by no means in every instance had less than serious training efforts. I think that is one of the problems we have to face up to and that is why the Commission has taken such a strong point of view: First, that there ought to be a training component to PSE; and second, that there ought to be a strict targeting to make the money go to certain people.

We ought to face up to the question of how many people can one accommodate in the labor market through public job creation activity. As I said, the Commission is dubious about going above that 725,000 figure on public service employment, and it is by no means sure we can handle that effectively at that level.

We want to look at the transition experience more carefully. If we cannot create more than a certain number of jobs effectively in the sense of jobs that are self-sustaining jobs, we face a dilemma, and your radical alternative is perfectly reasonable: People need money. If they cannot earn it, we have to give it to them. And the question of who gets it and under what conditions is a relevant consideration as far as I can see.

I would make this point: We have had almost 9 million new jobs since the first quarter of 1975. We have managed to reduce the unemployment rolls by almost 2 million. So there is a ratio of 4 to 1. That means there is a tremendous number of people overhanging the labor market. I once calculated them as three times the number reported unemployed.

I do not want to swear about that figure, but it indicates it is prettly close, at least in this last recovery period; 3 to 1. So that if we had 6 million reported unemployed, at the moment I think there is something like another 12 million people out there ready to take jobs if they become available. That means it is exceedingly difficult for this committee and for the whole question of Humphrey-Hawkins of getting this economy in a posture where only a little bit of additional effort would give you anything like full employment, because you never know what you have out there until you create more jobs. Every time you do that you have more people coming into the labor force.

The Swedish figure for female employment in the prime age group; taht is, 25 to 45—maybe 35 to 45—is about 80 percent. We are running in the fifties in general. So I think the gap between the mid-fifties and the low-eighties is what still happens out there with respect just to the women. Add to that the fact that we have just increased the older people who may be interested in working. I think that that is not a real threat unless inflation continues, but if inflation makes their

pensions no good they will seek work; and if you realize a bunch of kids are not counted and are hanging around school, you simply have a very large number of people interested in jobs beyond, I believe, any reasonable capabilities in the short run—not in the long run—of the economy to respond.

If anyone had told me that we would have 9 million new jobs since the first quarter of 1975, I would have said: You are a wild optimist. I could not have seen that.

The Commission estimated that 2½ million jobs per year would be pretty good, and we had almost 4 million last year; some of them part time, but nevertheless, it is a sizable job creation.

I just came back from Europe. The Germans have not had one net new job added in 10 years. The British have not added one net new male worker to their labor force and employment in the last 10 years. They have added 3 million women; so that the American economy has continued to show very substantial job creation capacity out of all comparisons with Europe.

But what we have is a tremendously elastic supply, and that is really what has given us our relatively high-unemployment rates. But if you turn it around and ask how is the economy doing on job creation, we are doing fine. We have got them beat by far. So it is which way you look at this, and you have to look at it both ways.

We are doing badly on the third front, the differential rates between minorities and whites. That was the third criterion the Commission used in 1976 to say if you want to have a monitored policy you had to worry about whether you were narrowing the gap between the minorities and the majority population, and we have done very badly.

The gap on the youth has widened.

Mr. WALLACE. You do not think that macropolicies help to narrow that gap?

Mr. GINZBERG. It may be helping, but the gap is widening, so you know it is obviously not sensitive.

I think from 1961 to 1969, macropolicy did quite well. There is no question. Brimmer did a special study for us on the economic position of the blacks in the United States, and the unequivocal evidence in his and other studies is that a long-sustained period of economic expansion and employment expansion is helpful to minorities. But this last time around was not that helpful: surely not the youth, which is another way of saying we had need of selective policies.

Mr. WALLACE. Mr. Ginzberg, from the front page of your prepared statement, 2(a): "We have found macropolicies inadequate because of inflationary pressures * * * to make jobs available for all who want to work at existing wages."

I gather it is your feeling that macropolicy will not do the job as far as cutting unemployment any lower than it is now?

Mr. GINZBERG. Well, no, I would not say that. I would say one of the things we have to learn—I hope we have learned—is macroeconomic policy alone is no answer to the problems of structural unemployment. We have to learn a lot about the improved integration of macroeconomic and manpower policy and explore as many different ways of using Federal expenditure policy to target, to make sure that the people who most need to be brought in have a better chance and make others wait a little longer.

Mr. WALLACE. Out of the 6 percent unemployed rate how many are structurally unemployed? Also what percentage represents frictional unemployment between jobs, and what percentage of the unemployment rate is cyclical?

Mr. GINZBERG. Of those 6 million, we know first that half of the 6 million are youth. You have to use a criterion. The Commission suggested that being unemployed for 15 out of the last 20 weeks is one criterion of "structural unemployment." That does not fit the youth because they often have not been regularly in the labor market.

The second thing that does not fit the youth very well is the income criterion. We have used two criteria to define "structural unemployment" in the work of the Commission. We set 70 percent of the lower standard of living budget, and 15 out of the last 20 weeks, those are the two criteria we use and they do not fit the youth. So we have to deal with them separately.

If you take youths 16 to 24—those in the labor market, not those in school—and ask how many of those are effectively linked into the regular jobs with career opportunities, I have a very rough calculation, that there are 3 million kids not linked effectively into the labor market; kids and young adults.

That is the kind of people who are having problems getting a regular job, where they have a chance of remaining in the job and going anywhere.

You know, I am not arguing that their job has to be better than minimum wage, but it has to have some possibilities, some career prospects. That is 3 million by my figures.

If you ask me then of the adults how many people are structurally unemployed of the counted 6 million, it was roughly under 900,000; I suppose it is down another 100,000, but there are a large number of people in the out-of-the-labor market that fulfill this description of structurally unemployed.

I am an adviser to the National Commission on Employment and Unemployment Statistics, and over there we do not count the discouraged workers as structurally unemployed. I take all of the discouraged, and so they are structurally unemployed, most of them.

Mr. WALLACE. You say 3 of the 6 million unemployed workers are youths?

Mr. GINZBERG. Of the reported unemployed, 3 million out of the 6 million are youths.

Mr. WALLACE. How does that figure compare with last year, 5 years ago, 10 years ago, and the 1930's? Three million; now, is that lower or higher than has been?

Mr. GINZBERG. In absolute terms, it is higher. In the 1960's and 1970's close to 50 percent of all of the unemployed have been youth. That reflects, I think, the increasingly big difficulties that some youths—by no means all—have had due to the bulge of the young people coming into the work force. We have a report on that if you are interested. The late Aaron Gordon, before his death, completed a report for the Commission on the disaggregation of the unemployment rate, and we will be glad to make that available to you.

During the 1970's I think that the youth unemployment figures ought to slowly go down in terms of the proportion of the unemployed who are youth. Although, I ought to warn you that the black

and Spanish-speaking youth levels will remain quite high. It is the white youth cohort that begins to diminish in size and the black and Spanish-speaking youth remain at a high level. Therefore, I could conceive of the fact that the differentials between minority youth unemployment rates, and the rates of whites could worsen in the years ahead, because there will be more minority youths coming of working age.

Mr. WALLACE. If half of the unemployed are young people, should our programs be aimed toward young people, or should I put it another way: I would like to ask whether we should consider programs similar to the old CCC program, specifically youth programs?

Mr. GINZBERG. As you know, the Congress, in 1977, put its pocket where its mouth was and finally made special moneys available for a whole series of new youth employment and training programs, including a very interesting entitlement pilot program which will give us new knowledge and learning. I cannot imagine it will not be of some effect. We have to sit and wait a little bit, but we do have a whole series of youth employment training programs, and I think it is very important. And the administration is very much on top of trying to learn whatever it can about those programs. Both the administration and the Commission will try to tell you what our best judgments on that are.

I am involved in that. I am the chairman of the board of the Manpower Demonstration Research Corp. Basically we have an elaborate research project underway to see whether this job entitlement approach will work.

My own view is that the difficulty on the youth front is to get the schools, local employers, and local government linked effectively to make sure that a lot of young people without skills and with partial skills get a chance to get some help in the transition from school to work. Most kids do not need much help, but some kids, especially some minority and poor kids, need help.

Mr. WALLACE. I would like to remind Mr. Leveson that he is welcome to join into this at any point.

Mr. Ginzberg, based on your experience with the Manpower Commission, what is your opinion of the effect of the minimum wage on youth unemployment?

Mr. GINZBERG. Well, you know, let us put the Commission aside for a second and let me say I am by profession an economist, and I keep reading half of that literature—not all of it—because I have got other things to do with my time. I have never been persuaded very much that changing the minimum wage would make a significant order of difference. It would give a few more jobs to youth, but I would have to ask the question from the point of view of national policy: What are the consequences of doing that?

There would be substitution of youths for adults. Maybe you want to do that; I generally do not want to do that. There might be less substitution at the margin of capital for labor and, therefore, there might be a few more low-wage jobs.

My general sense is that if you compare the relative levels of minimum wages and the average wages, which is that kind of comparison, and look at the United States in comparison to the OECD countries

in Western Europe, we run about the same entrance wage with minimum as to average wages as they do with special minimums for youths. So I do not really think that is the nub of the issue.

I have also been impressed—and that was my testimony about this—you cannot force anybody to work for minimum wages if the job is going to lead them nowhere, because there are alternatives. It is not only the minority youth, but white poor youth. There are different ways of making money. I once calculated that there are 240,000 people in my home city of New York who made a part of their income by illegal work: Prostitution, buying and selling stolen goods, narcotics, and so forth. So I think that you have to realize that while you can get a minimum wage and some people will buy, a lot of kids will not work for that.

I have talked about my friend, Mr. Bernstein, in Chicago, who is the mayor's adviser on manpower. He thinks like I think in New York, reducing the minimum wage will not really intensify the job search and employment of a large number of minority kids, so I do not see much relief that way.

Incidentally, there are about 170,000 special certificates available from the Secretary of Labor for paying less than the minimum wage if you have a training component in your initial employment, and those certificates have never been used to the full. So that if you say that you do not want to pay a youth a full minimum wage, because he is a little green and because you have to spend time training, you do not have to pay that; you can go to the Secretary of Labor and say: "I have got a training component. Give me a subminimum wage." And you get it, if you have a serious training program. So I think that is smoke in the eye that conservative economists send around. They do not want to face up to serious problems.

Mr. WALLACE. One more question. Of the 3 million youths unemployed, how do they live now? Are they at home, on welfare or unemployment compensation?

Do they live with their families who support them? Do we have the information on how these 3 million young, unemployed people live?

Mr. GINZBERG. That is a very interesting question. In a book that Stanley Freidland did for my research group at Columbia, entitled "Unemployment and the Urban Core," an analysis of 30 large cities with recommendations; that is a request I put to him: Find out what poor kids in Harlem do who are not in the Army, not at work, and not in school. What do they use for green matter, money?

That is the question, and he did a small case study. Actually, he got black interviewers, men and women, and they went into Harlem and got the kids to talk and we tried to put this together. It is not a macro-answer, but I did a little sample on this, and I would say from a little sample this is what came out: Many are supported by their families; some of them in odd jobs, some, for example, played in some kind of band over the weekends. This is several years ago, about 4 or 5 years ago, and they made, let us say, $60 and nobody reported them to the income tax people; and that was enough cash for them.

Some of them had recently come out of the Army, had saved money in the Army and had enough for what we called "disciplined work" and wanted to take time off.

Some of them were hustlers and were making money by hustling. Some of the women had illegitimate babies and were living off of

AFDC, with or without their mothers, as part of the family or separately. So I would say that you had the total range of how you can get money.

The food stamp program, incidentally, is a convenient program for kids who do not feel they are interested in full-time employment or cannot do it because of no jobs.

So I think what you have to see is that we have a series of income transfer programs. In general, the kids have less access to that, less access than the regular unemployed workers to build up a record and are entitled to unemployment compensation. But some young people have some unemployment compensation eligibility by having worked enough to earn it, so you have a whole range. I think it is a good question. I have never seen a macroanalysis of what are the sources of income. We have pieces of that study and I suppose if you asked Mr. Rosen of the Employment and Training Administration in the Department of Labor, he might be able to pull out several research studies and give you some kind of picture.

Mr. WALLACE. Thank you.

Mr. Leveson, I would like to turn now to this subject of industrialization of services. Do you think it has led to a perceptible improvement in the aggregate productivity measures? You cited a lot of increases in productivity, although I wonder if we should call it an increase in productivity if you simply have the customer do the work instead of the worker. For example, one of our previous witnesses pointed out that by getting the telephone users to dial the extra numbers, they eliminated the need for many long-distance operators.

Mr. LEVESON. That I think is the kind of shift to self-service we have had all along that has resulted in biases in the opposite direction. But we are moving differently since the mid-1960's, the period during which we started to have rapid increases in innovations of services. Until very recently I do not think it was possible to be very confident about whether those innovations would lead to important productivity changes, but I think that during the last couple of years we have started to see an explosion of changes that are having a significant impact.

While area codes increased dialing, the Bell Telephone System is coming out with a device which allows you to call frequently dialed numbers by pushing one button with the phone number dialed automatically. This kind of switch in the way technologies are evolving will be quite important for the service industries in the years ahead.

I do not think these changes will have a giant impact on rates of growth, but the effects will be significant. It is hard to say because we really do not have the numbers. If you use relative price measures as an indication of the extent of biases, fairly large biases are suggested.

Mr. WALLACE. The fast-food service is one example of organization for high productivity, almost an assembly line, to make hamburgers and so forth. That has brought people to use that service because of the lower costs and convenience. What is the next area for that kind of a development? We are assuming that it will go on.

Mr. LEVESON. I think we are seeing now, particularly in the last year, the emergence of what is being called family food restaurants which attempt to broaden the menu to include a broader range of personal services, having someone actually serve the food but still

organizing things in ways that are not fancy. Laundry services are expensive so they do not use tablecloths, but you still have a relatively small menu with somebody serving you. They may have a self-service salad bar, which is not considered a chore. Some people enjoy it; it is part of building amenities.

We see some changes like supermarkets getting into a lot of non-food, retail items and department stores having their own restaurants.

Mr. WALLACE. With the advent of the laborsaving home appliances, and the automobile too, what do you do when something goes wrong with one? I think this is one of the biggest problems in modern society: There is no way to fix the doggone dishwasher. It costs an arm and a leg to get somebody in to do it. And I have heard many wives say that they would trade them all for a good maid.

Mr. LEVESON. I had a station wagon I had to junk after 41,000 miles, at which point it had been towed 18 times. But I think that is a kind of problem which too we will solve by changes in technology. We have developed disposable systems; modular parts for television sets which can be easily replaced and in some cases more durable products.

Those have come from the manufacturing sector, but it does provide for a routine kind of service with uniform quality.

Mr. WALLACE. One other question, Mr. Leveson. In data processing it is my understanding that the location of the worker makes no difference. He can be located anywhere because of telephone lines. Do you feel this development will have an impact in dispersing the service workers?

Mr. LEVESON. I think it is having an impact in dispersing the entire population. There are a whole series of changes in transportation and communications which have made it possible for people to live in less densely populated areas, which have reduced substantially the advantage for businesses to be located near each other in the large cities or to be located near related kinds of industries, and that is a major factor behind the population shifts that we have been seeing since the late 1960's. I think that will go a good deal farther.

Mr. WALLACE. The deurbanization?

Mr. LEVESON. Yes.

Mr. GINZBERG. Could I come in on this?

Mr. WALLACE. Yes.

Mr. GINZBERG. We have finished a study entitled "the Corporate Complex Headquarters, New York". In the Nation's, and perhaps the world's, leading headquarters-city, the agglomeration tendencies were going in two directions: They went the way that Mr. Leveson pointed out of permitting some disagglomeration in the sense that some of the headquarters could move out——

Mr. WALLACE. Disagglomeration?

Mr. GINZBERG. The opposite of agglomeration—de-agglomeration, disagglomeration. The opposite of agglomeration.

On the other hand, the fascinating findings we showed and demonstrated was that the corporate support services—the banks, the lawyers, the investment bankers, the marketing specialists, and communications—kept on growing because they, despite the new technology, still had a logical symbiosis of staying very close together. I would simply, therefore, say that one has to take the general analysis down a step farther. Now, there may not be very many New Yorks; you

may only need one in the United States and one in the world, but the way we put it was that if there was still a heavy need for face-to-face contact, there were more deals made in a morning breakfast at the Regency Hotel in New York than in the city of Denver in the month.

Mr. LEVESON. I did most of my best work on the elevator.

Mr. GINZBERG. There is no doubt that a lot of support services, let us say, the computer, a lot of computer-support services of these large corporations are moving out to Long Island and farther on; no question. But nevertheless, at the highest levels of interchange of information I would say there is still evidence that the agglomeration tendencies are at work.

Mr. LEVESON. I think that is happening. I would characterize it somewhat differently. In Hudson Institutes study "The Future of the U.S. and Its Regions" for EDA, we found that at the same time you had general movement toward lower density, there is a maturing process which involves a filling out of the industrial structures in areas which are less densely populated. So we find particularly rapid population growth in the low-density cities. We find the industries with the most rapidly growing employment in areas that are having rapid population growth to be in finance, not manufacturing. Cities develop a kind of self-sufficiency. You do not have to come to New York, for example, for banking services. The largest bank in the United States is now in California. So in growing areas you get kind of a replication of services which used to be more centralized. Agglomeration is working, but instead of national centers there is more self-sufficient regional development.

Mr. KASSALOW. Mr. Leveson, in appraising the explosion, or near explosion, which you expect in some services, improvement and continued expansion, how do you evaluate the manpower side? I note Mr. Ginzberg will want to comment on this, since he has authored recent articles on it. It would seem that until now, until recently, anyway, the great expansion of the services has tended to bring with it a large number of mediocre jobs, and generally speaking, income generated in services has not been as high as the income in the goods-producing sector. How do you see this in the future?

Mr. LEVESON. I think we are moving away from that. Historically, as you know, the great growth of production in the service industries—I will focus particularly on nongovernment services—has been a little bit greater than in the goods-producing industry, but not that much greater. Yet employment in the service industries has grown much more rapidly. There is a tendency with rising incomes, education and leisure, to demand more services to a greater extent than we demand more goods, and this works in the direction of increasing the share of output which goes to the service industries. But at the same time services become more expensive because productivity growth is slow and you have a price effect which tends to discourage consumption of additional services. The net result is that service output grows only a little bit more rapidly than goods output. But employment grows much more rapidly because of slow productivity growth. That is the way it has been in the past.

Now in the situations in which we have been moving toward, the real costs of services are now perhaps not rising more rapidly than goods. There may be little or no difference in properly measured real rates

of productivity change between nongovernment services and goods-producing industries in the next decade. That means the effects of income and rising education shine through and we get more rapid growth in output of services relative to goods. That rise in output, though, also generates more rapid growth in employment in goods-producing industries, so it is possible we will see a situation in which the traditional relationship looks the same or looks like slower productivity growth in services and more rapid growth in employment. But in fact, output is growing in some real unmeasured sense and increasingly the additional employees are being used to produce that additional output. That makes a big difference in terms of whether or not we have the kinds of problems that people worry about, such as disguised unemployment, or whether or not we have productive jobs being developed.

In the course of the introduction of new technologies we also will see an increase in the sophistication of jobs. We certainly have that in the automation of jobs in banking and in the technical jobs in the health sector.

I think there will be some movement toward a greater sophistication, but the more important movement is toward more productive jobs. Industrialization of services does not mean that some people do not have the analog of assembly line jobs. But there can still be jobs that do not involve disguised unemployment and do not involve problems of whether the worker is not really doing something which is useful.

Mr. KASSALOW. Is there any evidence yet on the wage side of the closing or narrowing of the gap between service wages and goods-producing wages, which I think even the book you authored with Mr. Fuchs some years ago suggested was fairly large? Is there any evidence yet?

Mr. LEVESON. I have not seen any evidence that has indicated that, and I think one of the reasons is that a very large share of the growth of female employment has been in the service industries, and that has been heavily dominated by supply increases, which have tended to hold down the wages of women relative to men. I would not attribute the rapid growth of services to the availability of females. They just tended to use more women all along and are growing rapidly in employment.

Mr. GINZBERG. First, I want to call the committee's attention to the fact that Tom Stanback, on my staff, has a new book coming out, "In and Around the Service; Manpower Trends and the Service Sector," which is quite parallel to Mr. Leveson's testimony.

I am sympathetic to what I argued about the confusion we get into by not understanding output, and we are tripping ourselves up on a lot of the stuff, and I think Stanback does that. He has a long analysis of the locational dimensions, the expansion of service, and so on. But I want to make a few observations.

I do not think it is useful, as economists frequently do, to average everything out about, say, service wages versus manufacturing wages and so on, because it is varied by mode.

You have to recognize that government employment, which has grown rapidly, tends to have an above-average wage structure, especially Federal Government employment. Then you would realize that the big push in the services were public services during the 1950's and

1960's; that is, in education and health. Health is a very good illustration of the biomodal nature of wages. There are high earnings on the part of the professionals; it keeps on plaguing the country in terms of increasing the cost of medical care because of the earnings of doctors, dentists, and other professionals. On the other hand, you have relatively low—although not so low any more—earnings in the unskilled and semiskilled occupations.

I think one has to be a little more careful. Two kids getting out of Columbia Law School this year got hired by downtown firms. They had prior experience except summer work. They earned between them $56,000 the first year. That is the service sector. The hiring wage in New York for law firms for good kids is $28,000. So you have to be careful about how lousy are these lousy jobs. I would say that in my view they are not so lousy. I think they look pretty good.

The second thing was an interesting point Mr. Leveson made. He said there is a peculiarity between participation of services and goods manufacturing. We begin on the service front and then we have a very tremendous tendency in the country to want goods. For instance, you develop tennis as a middle-class sport. Well, you not only have tennis courts, but you have shoes, special costumes, shirts, et cetera; different colored balls, night lights for tennis, and so on. So there is this interplay, constant interplay, between expansion of services and further goods manufacturing, and I think that is an important thing to keep watching.

Moreover, there is a lot of peculiar confusion in the way we handle the data collection. A large number of jobs in manufacturing are the staff jobs. If you are an accountant and work for Ford Motor Co., you are really in a service sector. We do not count it that way because we count everyone in manufacturing as being in the goods production end of the scale. So I think that Mr. Leveson's general warnings about a lot of this are well taken.

What will happen in terms of expansion of employment? That is, I gather, one point that the committee would be interested in. I would refer to it this way:

We are now facing a situation in which one of the biggest thrusts to expansion in services, public sector jobs, is shifting. We do not have the demographic push to expand schools. We have done quite a lot of expansion in health, which is going to go to $200 billion probably this year. I do not know how far we can go. As I see that, even before proposition 13 hit the fan in California, there was a clear attempt to slow the growth of Government. That is also true, incidentally, in Western Europe. In a place like Germany it is one of the reasons why the whole economy is tight. They do not want to expand the public sector any farther, and true in Britain and France to a considerable degree. So that means if we do not have that, I agree with Mr. Leveson, I think there will be a hell of a lot of innovation and automation in the service sector. We may really face increasingly severe adjustment problems in the near term.

I think in the long term we have got to assume that increasing productivity is good for the economy. But in the short run if you get off one track on which you have been expanding jobs easily and employers decide that the only way to get costs down is to make improvements in the services and employee areas, that is a dangerous

shortrun threat to employment until we get some new expansion areas.

Major employment adjustments in short periods of time have never been easy things to do in our economy. If you have a contraction in public services, automation and computerization of a lot of private services going on at the same time, and somewhat slow growth in new services, we could have some trouble. That is why I am impressed with our 9-million job growth.

Mr. LEVESON. I would like to comment on a couple aspects. I am not bothered about that part, but I am worried about some other parts.

Mr. GINZBERG. Tell us why you are not worried.

Mr. LEVESON. I agree with Mr. Ginzberg's projection of the potential growth of labor force participation rates of females, so it is not because I do not think that the jobs will be needed in some sense. It is a question of what you mean by "needed" and what the capacity of the economy is to create those jobs.

We have to come back to the question of why we were so successful in creating jobs. It was not the result of any deliberate Government programs, because no one has been talking about Government effort in numbers equal to that kind of magnitude. I think it is because of a number of changes that took place in the economy which were fortuitous which have caused us to shift much more toward labor.

We have had since the midsixties an average rate of growth of employment of about 2 percent, which is about double the rate in the previous two decades, because of the growth in labor force participation of women and because of rapid entry into the force of youths born during the baby boom—and the high labor force growth will continue for at least another few years.

Labor force participation rates of age 25 to 54 years old are running close to 60 percent at the present time. They are projected by BLS to rise to around 63 percent by 1985. The rates for males of the same age are about 95 percent. If we get numbers over 80 percent, which is possible by the 1990's, then we will see strong continuation of trends in the labor supply.

To some extent, the increases in the labor supply, by holding down relative wage rates, tend to generate a demand for that labor. But there has been no huge decline in relative wages or rise in unemployment, so we have to ask ourselves why did we have this increase in demand at the same time as we had increases in supply. I think there are definite reasons, and those reasons create other problems, particularly slow economic growth.

What has happened is that the relative cost of capital-intensive production has increased substantially compared to labor-intensive production, and that has happened for three reasons: First, the effects of inflation, which tend to cause a frontloading of costs for capital projects and which create increased costs under present tax laws; second, the increases in costs for environmental and related-types of regulations, which have fallen particularly heavily on capital-intensive industries; and third, the effects of increases in the price of energy, which again, is particularly heavy in capital-intensive kinds of production.

In addition to these three elements which have raised the relative cost of capital-intensive production, we have a whole series of rising business costs and risks which range from everything from the possi-

bility of some interruption in oil supply to the usually high risk of serious recession, to the fear of price controls which could cause problems during a period of inflation in trying to get a stream of revenue commensurate with current capital expenditures.

It is a combination of risks and changes of relative prices, which I think have had a dramatic influence on the willingness of businessmen to go ahead with capital intensive types of production and to substitute wherever possible, labor intensive methods of production.

This has created a whole series of changes. For one thing, it gives businessmen a reason to stay where they are. You do not build a new plant; you use existing facilities. That offers you kind of a flexibility.

We talk to some companies who say that the movement toward greater labor intensity does not describe their situation. Then they tell us how they have systematically divested themselves of more labor intensive operations which they do not know how to handle as well. We see a growth in the American Stock Exchange which nobody understands, with the smaller companies getting into the areas which larger ones do not. I think there are a lot of changes going on we do not understand, in the way the economy is shifting toward labor intensive production. These have been associated changes in demand for labor relative to capital because of a climate of high business costs and risks, which are a major reason that our economic growth is slow at the present time.

Now, in a sense we luck out. If we had to have these increases in costs and risks for a legitimate environmental reason, for an uncontrollable energy reason, for some uncontrollable inflation reason—why not have them at the time when the labor force is increasing rapidly? But I am not ready to throw a party. These problems will continue after the labor force growth has slowed down. We are accepting a situation in which we have slower growth in production, slower growth in real incomes, and more rapid growth in employment. It will take everything that we can do to reduce these costs and risks so that strong economic growth can resume by the time we no longer need such rapid growth of jobs. If we just get complacent and say we will let these economic forces generate jobs, let us take the same income and spread it around—then we will find that when we no longer have rapid growing labor supplies—we will not have the forces in motion that will allow us to grow as rapidly as we might. So I cannot rejoice. There are some ways in which our problems came together at the same time fortuitously so we did not have massive unemployment, but we will have slow growth to a much greater extent than I think is appropriate if we do not recognize this and begin to act.

Mr. GINZBERG. I would agree. We understand less of what is going on. I have not had a chance and have not seen many people analyze this last 9 million job increase, and I think you have been very suggestive. I am going to try to think about it and maybe do——

Mr. LEVESON. I have a paper which I will send the committee.

Mr. GINZBERG. This is the first kind of explanation of anybody that has looked at this, and I have been uneasy with what was going on out there. But as I listen to you I find an attractive and reasonable first interpretation that the risks are up and the costs of investing capital are way up. But I am not yet clear as to why it was so easy to move on the labor side.

Mr. LEVESON. Neither am I. In this question of looking at firm behavior, I think we need to know more about that.

Let me address one other issue which I think is critical, and that is recent trends in employment among black males. I agree completely with Mr. Ginzberg's characterization of structural problems and the extent to which you can, and cannot, deal with them through assimilation in the economy. I think there are a number of recent changes which we are just beginning to notice and have gotten to the point where we understand what to do about public policy.

If you look at the labor force participation rates of nonwhite males, as you know, they have been declining very rapidly for quite some years now. But if we look at the proportion of nonwhite males working 50 to 52 weeks, that has been rising, and that suggests some kind of split in the labor force. Some people are working more and some people are not working at all, and it suggests something very disturbing if you think of the social impact.

We looked at this in our study, "The Unemployment Problem," which has been sent to the Members of Congress. It has guesstimates, by the way, Mr. Wallace, on how much of last year's unemployment rate was structural versus cyclical, and you can see that if you like.

Another thing that we did was to notice in the regional analysis that, when we looked at the question of how incomes in cities have been affected by slower economic growth and recession, and we looked at how the relative income levels of the poor—for which purpose we defined "poor" as the lowest 20 percent of the population—we found by and large, the very predictable result that the income growth was slower during a period of slower economic growth in the cities compared to elsewhere and that growth was slower to a greater extent, compared to the same cities for the poor of those cities, if you look at the poor families. But if you look at individuals, we find a striking result: In metropolitan areas, both inside and outside of central cities, both a million or more and smaller populations, there was a very substantial relative increase in the incomes of low-income individuals.

Now some of this reflects pension benefits and some of it reflects rising labor force participation rates of women. But there is more than that going on.

If you look at changes in the labor force participation rates from 1966 to 1973, which are not influenced by the current recession, and break them down by marital status, you find that the labor force participation rate has been rising a little bit for white single males. But for black males the labor force participation for singles has been rising very rapidly. At the same time there has been a huge decline in the labor force participation rate for black males in families.

We are not sure what is going on exactly, but as you know, in the last 2 decades there has been a very large rise in the average education level of blacks coming into the labor market, and what this combination of fragments suggest is that the young, well-educated blacks coming into the labor force are doing very well, at the same time as black males in families who may be older and less educated are suffering most from the declines in labor force participation rates and from the declines in the relative incomes in the cities.

Those changes occurred during a period of continuing family breakups, at a particularly high rate among black families, so to some extent

the patterns may simply reflect the tendency for the same individuals, the ones with the strongest labor force attachments in black families, to separate from their families. If that is the case, that would be particularly serious and important from the point of view of welfare reform to avoid incentives for family breakup.

Now, let me just comment very briefly on what this means in terms of how you go about changing incentives.

I think my view of the minimum wage evidence, and I have read about half of these studies, and probably the same half as Mr. Ginzberg, is that something like one-third of the teenage unemployment—age 16 to 19—is attributable to minimum wage increases. I do not buy the argument that you should not have a two-tier minimum wage system because it would not make enough of a difference. I agree that the incentive systems with income maintenance programs and illegal activity will mean a lot of people will not accept minimum wages, especially if the minimums are lower because of a youth differential, but I think the private market will take care of that nicely. Employers will not go all the way down to the youth differential if they cannot get workers. The market bids the price up, and we ought to give it a chance to work.

I do not see that as a major solution, though. I think the major solution is to have some kind of wage supplement program of a substantial nature. I have long been in favor of a plan similar to that which has been proposed to this committee by Lester Thurow. If we have a wage subsidy plan so you give people additional money for working if their wages are low, rather than taking away a large part as we do with the present welfare system we can skew the incentives toward work. The important thing is not the wage but the full schedule of payments, including size of grants.

Recent studies on the effects of economic incentives on family cohesion suggest that this would have an important impact in holding families together. Now families separate because one member can collect welfare benefits while another member is working, and that loosens ties and other problems intervene and so families separate. I think you overcome this kind of problem with this sort of system, so I would recommend very strongly going into the direction of wage supplements. In the meantime I would still set a youth differential and minimum wage. I do not see that as a permanent answer but something like it may be needed in a wage supplement payments schedule any way.

We need to focus more heavily on how changes in family composition are related to the income of labor. This divergence in trends between singles and persons in families is potentially extremely serious. For the children's sake you would want to have the stronger economic gains in families. Yet the ones doing most poorly are in black families.

Mr. SHELDON. Mr. Wallace, do you have anything else?

Mr. WALLACE. Yes, I would like to ask Mr. Ginzberg a question. You said something about apprenticeship programs. Some of our recent witnesses have talked about the weaknesses of our apprenticeship system in the United States as compared to European countries. Do you think the development of a stronger apprenticeship program

involving education and labor unions would help provide strength, or is the weakness of our program not of great significance?

Mr. GINZBERG. I think there are quite different styles which different economies have used in getting its skilled manpower prepared. I am not satisfied that we can "emulate" the good part of the German apprenticeship program. Kids drop out of school and the good apprenticeship programs in Germany are, therefore, important in the German economy.

There is also a large amount of pseudoapprenticeship programs, which is simply paying them a lousy wage, teaching them nothing and leading them nowhere. It is like retail selling and so on, and so I do not want to generalize. There is a hard core of good apprenticeship programs in Germany.

I was up in Canada and opened a conference on apprenticeships some months ago, and that is again a somewhat different kind of economy in which you cannot even enter certain fields without having a license for having completed a formal apprenticeship. I do not think that is necessarily so desirable.

We have a much looser labor market, much more pickup of skills, and I would simply say that since we have a dropout rate now of something like 50 percent of all people who start in an apprenticeship, we better first understand why that happens.

I think the general reason is that the people make a reconsideration of their circumstances and decide they are more interested in getting the optimal wage they can get at the time rather than picking up additional skills with the hope of doing skilled work later on.

One of the problems that we have, tentatively, on our agenda at the Commission, is to look into the question of whether there are any potential shortages of skilled workers looming on the horizon in the United States of any broad significance. You can always have local shortages, but I am beginning to hear that there may be some kind of age bunching and we may have been underestimating the needs and overestimating the amount of training going on.

Most of our formal inhouse training is conducted by the large corporations. I do not see any particular reasons for putting more controls on the labor market which says that you can only enter certain kinds of employment if you have "certain certificates and licensing."

On the other hand, I am very much in favor of serious training opportunities being offered to people so that they can become, instead of a half-baked mechanic, an honest-to-God mechanic. I see a lot of advantages to that, and in a lot of other fields.

The situation is so diffuse in terms of vocational schools, private schools, and public schools, the importance of an apprenticeship to trade unions for the control of the market, that I do not really know how you deal with all of that in a simple answer.

My own view is the Secretary of Labor and others I know are trying to get more emphasis on apprenticeship, and I would go about that selectively, but I do not think there is any big answer to the youth unemployment.

Mr. WALLACE. Thank you. I have one other question. Other witnesses have stressed that most job opportunities lie in small enterprises in the private sector, not so much in the large-scale multinationals. How could

this affect programs on a large scale that have a specific impact on employment in small businesses?

Mr. GINZBERG. Well, as I mentioned to you earlier, I gave a speech to the business council, and Mr. Metler, who is the new head of the NABS program, was on that program, and clearly the private sector initiative which the administration has in the CETA reauthorization is directed to the creation of local councils of employers, trade union members, and the educational authorities to see how they can really get on top of the local labor market more effectively. We are just beginning to do this in a complicated place like New York City to try to identify the kind of small employers, whose needs are very seldom reflected easily into a complicated bureaucracy, and see what the replacement opportunities are, and maybe the wage subsidy thing has possibility.

My only objection to subsidies is that I do not want the Government to pay for training that industry normally does for itself. I have always been a little protective of the U.S. Treasury. If we can work that out, selective subsidies may make some sense.

I know from people in the metal business in New York City, in spite of the fact that we have had a lot of manpower funds going into the city, we were not able to get locally trained youngsters to come into good-paying jobs. Years ago they paid $5 and $6 and hour and the only people they got were illegal immigrants; metal plants in New York willing to pay $5 and $6 and you could not get the kids from the formal and vocational school system. I know it is hard to believe, but I have no reason to doubt my informant; whereas, they hoped to get American kids and not foreigners.

So I think the whole question of structuring of the local labor market and how people get training and how they get into jobs is an afflicted story.

Marsha Friedman on my staff is finishing a monograph on the different sources of training for different kinds of jobs in the United States as a handbook to help the local manpower people use their dollars a little bit more sensibly. We are a very open society in terms of how do you acquire skills. Most of the people just pick them up. We have some apprenticeships, but most people pick up their skills.

Mr. WALLACE. What if a small business hires someone, say, under the Comprehensive Employment and Training Act, CETA, and it does not work out. Then they let them go and find themselves saddled with a higher unemployment compensation tax. Is there a connection between hiring CETA employees and the liability to unemployment compensation?

Mr. GINZBERG. You will have to ask that question to the Department of Labor. That is beyond me. I do not know my way through that level of detail. I am sorry.

Mr. KASSALOW. Most of the subsidies which are envisaged under the CETA would, really, could, go primarily to the small businesses. There are limits on who can take tax credits.

I would like to get back to a question on the service economy and something that Mr. Ginzberg wrote which relates to your suggestion there may be changes coming in terms of wage structures taken as a whole. One of the issues he raised that has been raised before us on

another occasion is the fact that many of the other benefits which frequently go with jobs in the industrial economy like paid vacations, supplementary pensions, but especially paid vacations and holidays, are not available in large numbers of service jobs. This may change in the jobs of a higher quality in the future, but have you given any thought of that problem as you get expansion in that area?

Mr. LEVESON. I would say on the whole in white collar and service employment you tend to have more benefits available of the kinds that are related to leisure. There may not be as extensive monetary benefits such as health insurance and pensions. There is a tendency from some earlier thinking to talk about this is the way service industries look at a point in time and this is the way goods industries look at a point in time and there will be a shift effect with the goods industry looking more like the services and so on, and I would like to suggest that that, in fact, is not a clear representation of what is going on.

The very large amount of resources devoted to production in services provides an incentive to change what goes on within services, so the gap in productivity does not just mean a shift in unemployment. It means tremendous pressure to change what happens in service industries; they begin increasingly to look like goods industries. So we see growth of unions in the health sector, an increase in the average firm size with supermarkets and department stores, for example. I do not think the service sector will look entirely like the goods sector. Work which involves people dealing with people will never completely be the same as working on an assembly line.

I see the shift toward services and white collar work in general—as probably the major way in which, is a period of slow growth increases in the amount of leisure time will take place. As part of the general tendency for service industries to look more like goods industries in some respects; some relative increases in financial benefits should occur at the same time.

Representative BOLLING [presiding]. I would like to get into the act briefly. First I would like to apologize—apology is not the right word because I had to do what I did. But I have managed through most of the previous discussions just to miss votes, but this time we had a very complicated resolution that involved the Budget Act, Public Works, Appropriations, four authorization committees, on a rule designed to make them all relatively happy, and we won by better than 3 to 1, so it must have been a relative success. It was something I had to do.

I want to express my very real gratitude to you both for coming and participating. In am very hopeful that this study will turn out to do some of the things that I hoped for in the very beginning, and that is to come up with a slightly fresher approach to old problems.

I do have a question that rose out of some of the things I just read. There has been very little of this, as Mr. Ginzberg's prepared statement suggests, effective coordination between manpower, education, and income programs as well as other Federal programs.

That is something that has—I come from a medium-sized city with the standard dilemmas of the central city. I came out of education into politics. I have been aware of the so-called structural unemployment far longer than many and I have watched with horror what goes on in

programs, that I approve of and which I support, in my own community because of the virtually total lack of coordination.

How do we go about doing something about that? Part of it must be congressional, but part of it must be something else as well.

Mr. GINZBERG. I think the Congress surely contributed in a large way to the confusion with the original MDTA by putting half the money in HEW and the other half in DOL and saying HEW should do the training. That was an impossible way to set it up from word one.

Second, I will say the Congress did try to redeem some of that by putting at least some special money on the line to encourage coordination between vocational education and manpower, and that has not worked in general. It works in selective States where the Governor is really interested and is beginning to bring those parties together, but in many States we have a weak gubernatorial structure and they cannot do it there. You are dealing with very powerful bureaucracies, each one of whom have their own constituencies. They have their own ways of relating to and receiving money from the Federal Government. They respond to the Federal Government differently.

My own view is, as I claimed earlier while you were not here, Congressman Bolling, that we lack key information on the manpower programs. This information should go to the Department of Labor and to the Congress. However, whatever we get from the Department of Labor is 10 times better than out of HEW, who puts the money on the stump and runs away.

Relatively speaking, the Department of Labor is a very tight kind of operator, although much too loose from my point of view.

I do not have any easy answers to this coordination problem. I think it really can only come if local people understand the low effectiveness of what they are getting out of the Federal dollars.

I keep walking around New York and telling people we get a half billion dollars this year in manpower money and it is a damn shame if we waste it; that we ought to get better than 25 percent effectiveness out of that money, and in order to get that we have got to relate the manpower moneys to some economic development, to some kind of sensible relationship to kids falling out of school who need to be picked up, and so on.

I would have a general objection that simply says that the thing that is shortest in the American structure of programs is not money, but institutional structures that can perform. That is, the programs are simply not institutionalized with effective performance.

I spent yesterday all day with one of the largest multinational companies that was looking at its responsibility in its home city, thinking its way through that. And several of us said to the senior personnel of that organization that unless you and your colleagues in the private sector play a role in economy development, if you leave it exclusively to the municipal government, it cannot organize itself to do that job.

We have need of a large number of intermediary organizations which have a capacity of using joint funds.

Now I have an interesting manpower illustration from the Federal Government. The Department of Labor was the lead agency which got HEW, HUD, EDA, and LEAA money together into a pot that created the Manpower Demonstration Research Corporation to do the experiment on supported work. It never would have been able to be done in

the normal processes of coordination. I think the Ford Foundation made it possible by being the catalyst. This lead is what made it possible for Federal funds to come to one place and be used to attack one problem.

Representative BOLLING. I have felt that the lack of modernization of institutions is a very important part of the problem, but not only in this area but in the other related areas of welfare as well. Although I know that welfare is highly institutionalized, the lack of effective institutions in the very broad sense—and I am not knocking social things. If you have a time problem, Mr. Ginzberg, please don't hesitate to mention it.

Mr. GINZBERG. I have until 25 minutes after.

Representative BOLLING. I am aware that witnesses have time problems because I have some, and I like to be able to accommodate them.

But if we were to go back and just theorize, if we were to go to the beginning. I was a Member when Congress passed one of the first manpower programs and I remember it was a horror. As a matter of fact, I ended up preferring a Republican bill to a Democratic bill and I had something to do with its adoption because the Democratic bill was badly drafted. But even the Republican bill, or the compromise bill, was an atrocity. We had to obtain a special rule out from the Secretary of Labor pertaining to the training end of the program that made it permissible to teach people how to read and write since you could not otherwise train them. We neglected to include that. I believe that is accurate.

Mr. GINZBERG. I think that is right. I remember something about that.

Representative BOLLING. It seems to me that is a good illustration of how not to do business. We lost a great deal of ground instead of gaining simply because we were in a great hurry. Although there was a great deal of hardship, we would have done a great deal more had we moved more cautiously. Is that right?

Mr. GINZBERG. I believe that. There is such a thing as being too slow, though. I watch the British. They take so much time on the windup and are so cautious about their money that they never get anything started. They are very slow in general. I do not want to be unduly critical, but we sure rush in with the money first and figure out how to go about things second.

Representative BOLLING. You must have some knowledge greater than mine. In what countries has it been done moderately well?

Mr. GINZBERG. Both the Germans and the Swedes have much more serious structures directed to the labor market. The population of Sweden is about the size of New York City, so you have to remember that. But I would say that given their different traditions and different structures, the attempt of getting serious governmental efficiency out of whatever structures you have, I think you would have to give the Germans a pretty good mark on the manpower.

It is also the Germany that produced Hitler. You have got to at least think about how people look at their government and what they expect to be done, and maybe we are better off with an inefficient government.

Representative BOLLING. I never suggested we ought to have efficiency in those terms and with that point in mind, but I do think it is pretty

terrifying that an expert such as you talks about achieving as much as 25 percent efficiency effectiveness when we have spent billions of dollars, and I must admit that I have had a tendency to spend money first when people were in trouble, but on balance I am beginning to believe that causes more trouble, which does not mean that under certain circumstances I would still not favor spending the money.

Mr. WALLACE. Quoting from his prepared statement, Mr. Ginzburg says:

> The availability of about $300 billion of income transfer money—Federal, State, and local—and another $200-billion illicit, illegal, and off-the-book activities creates alternatives for many to reject poor jobs that hold no promise of leading anywhere.

The results of Proposition 13 in California may indicate that some people will have to take those jobs that do not get anywhere, at least until they can get a better job, instead of living off their largesse of transfer payments.

Representative BOLLING. Mr. Ginzberg, I know you have to go. I am glad to see you balance out your opinions. At first when people talked about the problem of structural unemployment they were ignored. Tom Curtis, a Member of the House from Missouri, was one of the first people to talk effectively on the subject, but few others did for a long time. I am glad to see you include the balance of the importance of a macropolicy as well.

I have had some experience with unnamed persons who are proud of themselves because of what they know, but they are struck dumb when you talk about the macroend of things, including inflation. These same individuals talk only about inflation, whereas you talk about inflation in realistic terms. We have to deal in realistic terms because we will only be able to do something when the country decides something should be done. And it appears to me that we must emphasize keeping everything in balance and not allowing policy to swing back and forth.

Mr. GINZBERG. If you did not consider macroeconomic policy as central and critical to the employment sector, you would be copping out. There is no possible way of seriously addressing large-scale unemployment, including the structurally unemployed, without making as much of a contribution through the macroeconomic approach as possible. I think we are hung up because we have such troubles, given our partners to the east and west of us, and that really constrains our macroeconomic policy at the moment.

Representative BOLLING. It does.

Mr. SHELDON. Mr. Ginzberg, at several points during the course of the morning each of you, as visiting panelists, have mentioned certain reports which you say we might find of interest if you were to send them to us. Would you indicate which ones you think should be included in the record and which ones we should merely read and be educated by?

Mr. GINZBERG. Fine. I think there are sections of reports rather than the full reports, one of which I left with Mr. Kassalow.

Representative BOLLING. I hate to come in late and ask questions because they may have been discussed before, but I would be interested in what we could do in the Congress that would be beneficial to the country as we shift from one kind of economy to another as it

appears we are doing. For instance, the major shift from the manufacturing to service, what are the kinds of things that would be useful?

Mr. LEVESON. One recommendation regards Federal statistical policy. Increasingly we are finding with the kinds of changes taking place that the measures of service-industry performance are totally out of date. There is a lot of work done on output measurements and probably we should not spend more money than we do now in worrying about that. But we have a problem in that the shift to self-service tended to cause a misstatement in one direction and the shift toward amenities in the other direction. The rise in prices of services relative to goods is being substantially overstated because of the increasing content of services, and this overstatement biases the price index as a whole and increases pressure to mark up prices and causes further inflation. So I would suggest one thing we can do is get better price measurements for the service industry.

On the question of the implications for unemployment, I think the employment effects come out relatively the same. I think the kinds of issues that will be raised most about Federal policy are likely to be very specific issues at industry level. The main thrust of policy direction should be to facilitate these kinds of changes and avoid having government standing in the way when people want to go ahead with new initiatives. I have in mind the kinds of issues that come up when we talk about setting up a national stock exchange or a national check clearing system and when we talk about increasing competition in the telephone industry—the ability to tie peripheral equipment and the way that affects business operations and integration with other kinds of automation going on at the present time.

Federal regulatory action, just by being much slower than the sudden rapid pace of technological change, can retard innovation, and we have to be more sensitive and try to move quickly and we try to balance other considerations like rights to privacy and so on. There will be a lot of specific issues and we should go into it with a mind set that will not stand in the way of new opportunities.

Representative BOLLING. Would you agree that we need a continuing education on the part of policymakers with regard to technical advances?

Mr. LEVESON. I think that is one element. At the same time I think we need to do some systematic thinking about what some of these issues are going to be ahead of time and not wait until there is a real confrontation after building up of positions, which is hard to wear down later on.

Representative BOLLING. Is that the situation that has occurred in the telephone business. That whole question of how to deal with a confrontation that had not been anticipated earlier by policymakers?

Mr. LEVESON. I do not know about the details.

Representative BOLLING. That is one particular situation I am conscious of.

Mr. LEVESON. I suspect that we have largely developed a pattern of behavior toward industries in various situations which may have been appropriate the way those industries existed in the past, and the industries have started to change and we have not really prepared. So it is a question of both having policymakers recognize what in-

novations are coming through and also getting some leadtime on thinking about what kinds of changes will be required.

Representative BOLLING. What kind of things are you talking about, other than convenience foods, when you made your first comment on statistics?

Mr. LEVESON. For instance, we have a traditional problem of price indexes in hospitals greatly overstating the amount of inflation because of innovations taking place. We always had that problem in the service industries. In some industries it was the other way around because of the shift to self-service in the department stores, et cetera, which mean there was less service being offered, so you had the obvious kind of bias.

We are getting changes in the same direction and much larger changes. The move now is from fast food to family restaurants where you offer a broader menu and more personal service, and personal service has become cheap enough to provide because we can organize better. It is not the shortage in things that would reflect the usual rise in prices, we tend to overstate the price change.

Representative BOLLING. Is there any way to have valid statistics in employment with the substantial number of nondocumented people?

Mr. LEVESON. I do not have any special thoughts on that subject. I did note that I think the problem of disguised unemployment will be less as we have a more organized service sector in which you get recordkeeping commensurate with the changes in firm size and so on. But I think the problems of measuring where people stand at the margin will always be with us.

Representative BOLLING. There is no way to get a completely accurate census?

Mr. LEVESON. I think they will get worse.

Representative BOLLING. Thank you very much. I am delighted that you were still here when I was finally able to break loose from other business.

Tomorrow we meet, at 10 a.m., in room S-207 of the Capitol.

The committee stands in recess.

[Whereupon, at 12:25 p.m., the committee recessed, to reconvene at 10 a.m., Friday, June 16, 1978.]

SPECIAL STUDY ON ECONOMIC CHANGE

FRIDAY, JUNE 16, 1978

BREAKING THE PRICE SPIRAL

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10:05 a.m., in room S–207, the Capitol, Hon. Richard Bolling (chairman of the committee) presiding.

Present: Representatives Bolling and Long; and Senator Hatch.

Committee staff present: Louis C. Krauthoff II, assistant director; Thomas F. Dernburg, Kent H. Hughes, and William D. Morgan, professional staff members; Mark Borchelt, administrative assistant; and Stephen J. Entin and M. Catherine Miller, minority professional staff members.

Special Study on Economic Change staff present: Charles S. Sheldon II, research director; Robert Ash Wallace, research director; Richard D. Bartel, staff economist; Paula J. Dobriansky, research assistant; and A. A. "Chip" Sayers, research assistant.

Also present: John B. Henderson and Everett M. Kassalow, Congressional Research Service, Library of Congress.

Representative BOLLING. The committee will be in order.

I, once upon a time a long time ago, made an opening statement which was to apply to each succeeding panel thereafter. I did this because the statement was very long, but in it I made one point that I repeat in each of the panels, and that is that we seek a discussion rather than a conventional hearing. I hope that members of the panel will do their best to summarize their prepared statements which, of course, will appear in the record in full. But I hope they can summarize their statements in the order of 10 minutes. I am not enforcing this very rigidly, so everyone is on his honor to try to save us some time for discussion.

The first witness is Mr. Gardner Ackley. He is a professor of political economy at the University of Michigan, Ann Arbor. During World War II, he was an economist with the Office of Price Administration and the Office of Strategic Services. He has a distinguished public career as a member of the President's Council of Economic Advisers from 1962 to 1968, and Chairman of the Council, 1964 to 1968. He was U.S. Ambassador to Italy from 1968 to 1969. Since 1940, he has been associated with the faculty of the University of Michigan, his alma mater.

We are happy to have you Mr. Ackley. Will you please proceed.

STATEMENT OF GARDNER ACKLEY, PROFESSOR OF POLITICAL ECONOMY, UNIVERSITY OF MICHIGAN, ANN ARBOR

Mr. ACKLEY. Thank you, Mr. Chairman. The statement I prepared for this discussion is relatively short. Still, it may be too long to be read in its entirety. Therefore, rather than try to summarize, I think I will read selectively, omitting certain passages.

Once again, our subject is inflation. Appearing before the Joint Economic Committee just 20 years ago, in May 1958, I said:

> The problem of inflation may very well be our No. 1 domestic economic problem in the years ahead. Thus, I believe that the Joint Economic Committee can perform a great public service, through its present study and otherwise, in contributing to the public understanding of the nature and seriousness of the problem.

I wouldn't change a word of that today. Nor will I change very much of what I then went on to say about the nature of the problem and the means available to control it, and have continued to say at many hearings in between.

In my view, our main inflationary problem is not the recent speedup in the inflation rate. Much of this speedup is accidental and transient; some of the rest was deliberately legislated, with full recognition of its inflationary consequences. I doubt that much or any of it is related to the decline in unemployment. Rather, the main problem is the persistence for 10 years of a clearly unacceptable rate of inflation, and our unwillingness to understand the fundamental nature of this inflation and to consider reasonable means to deal with it.

When I say that some of the recent inflation speedup is accidental and transient, I refer, of course, to the spurt in food prices, which are highly variable, which dipped considerably—at the producer and processor level—during the latter part of 1977, and which are now rising rapidly again. But consumer food prices still have risen less than other prices since 1974; moreover, prices of food products at the farm and processor level have risen no more than other prices since 1948, since 1958, or since 1968. I do not expect them to rise faster than other prices between now and 1988.

When I say that some of the recent inflation speedup was deliberately legislated, I refer, of course, particularly to recent farm price and minimum wage legislation. The inflationary consequences of this legislation were well known, and were presumably held to be of lesser import than the benefits expected to be achieved through these actions. The inflationary impact of recently legislated payroll tax, increases is mainly still to come; but it, too, was presumably held to be worth its cost.

Frankly, I do not understand the sudden new increment of excitement and alarm about inflation recently expressed by the press and public opinion. And I am not sure to what extent public opinion is merely reflecting the recent and sudden concentration of media excitement on this topic.

But whether the renewed alarm about inflation is mainly a "media event" or is genuine—and I hope it is genuine—it is important to focus attention not on the food-price sideshow, but on the main event. This main event takes place in the dominant industrial and service sectors of the economy, where for 10 years an inflationary spiral has been grinding on.

During this decade, changes in the pace of the spiral have been associated mainly with controls, 1971–72; with supply dislocations in internationally traded raw products, 1972–73; and, of course, with independently determined changes in energy prices, 1974 and after. At times—1967–69—when the spiral emerged—and again in 1972–73—the inflation reflected excessive aggregate demand, the result of mistaken fiscal-monetary policies.

On the other hand, the inflation persisted through two recessions, one of them the sharpest and deepest since the 1930's. On the average—whatever that means—aggregate demand has not been excessive, and it is not excessive today.

In this spiral, firms in every sector and industry, in every trading nation, have been raising prices to reflect rising labor costs, and rising prices of goods and services purchased from the domestic and foreign firms, sectors, and industries. Each firm's material costs rise because its supplies have raised prices of their products. Each firm's labor costs rise because its wage rates must follow rising wages in other firms, and must offset the effect of inflation on workers' cost of living.

If only prices of goods used as materials would not rise so fast, prices of products would not need to. If only some wage rates would not rise so fast, other wage rates would not need to. If only prices of consumer goods would not rise so fast, wage rates would not need to. If only wage rates would not rise so fast, prices of materials and products would not need to. Final and intermediate buyers at every stage have been able to afford the higher prices and wages because their incomes, sales or tax receipts are swollen by the same inflation that raises sellers' costs.

Thus, we experience inflation mainly because we have been and are experiencing inflation. That is what we mean when we call it a spiral.

How can we slow down this spiral? There are four general ways available. One is to adopt fiscal and monetary policies that will raise the unemployment rate, say, from 6 back to 7 or 8 percent. Economists of various schools, using various methodologies, have for a number of years been intensively studying the relationship between unemployment and the inflation rate. Their models differ considerably. Yet most of their empirical estimates of the quantitative impact of higher unemployment on inflation fall within a fairly narrow range. Essentially, they imply that—in the United States—a 1 percentage point increase in the unemployment rate—from, say, 6 percent to 7 percent—maintained for a year, would reduce the inflation rate at the end of that year by between 0.1 and 0.6 percentage points. And real output—the total of goods and services available to share—would have fallen by about 3 percent.

Whatever his brave words, no political leader is ready to buy so modest a reduction of inflation through deliberate action to increase unemployment and to reduce production and real incomes. Indeed, so long as the unemployment rate stands as high as 6 percent overall—and up to 35 percent for significant groups of workers—no political leader is going to take any deliberate action to prevent the further slow decline of the unemployment rate. Nor should he. No sensible estimate of the costs of inflation makes that a worthwhile trade.

A second possibility is the use of direct wage and price controls. I hope no one is even thinking about using that method to break the

spiral. I think that I have had as much experience with wage and price controls as anyone, and I know that their economic, political, and moral costs are not worth paying—unless or until the inflation rate, without controls, can reasonably be predicted to be very much higher than even the most pessimistic observers now foresee.

A third method would attempt a revolutionary recasting of our industrial structure and employment institutions in an effort to create everywhere the kind of effective competition that does not permit any price or wage to be raised so long as there are any idle workers or any unused industrial capacity. While there are a number of modifications that we might—and should—make in our legislation affecting competition in labor and product markets, which would have useful, if marginal, effects on future inflations rates, we would not be willing to pay the economic and social costs of a course of action sufficiently drastic to have truly significant effects on inflation.

In my view only the fourth type of approach may be both feasible and acceptable: Some form of noncompulsory incomes policy. This is what I advocated in my 1958 testimony before this committee, and have continued ever since to promote.

There are several basic types or "models" of incomes policy with, of course, opportunities for innumerable minor variations. This first model is that of an incomes policy enforced by "jawboning" centered in the White House. This is the form used in the "guideposts" effort of 1962–68, with the jawboning centered in the White House.

It appears that the Carter administration intends to conduct an income policy essentially of that kind. To be sure, its basic standard—"deceleration"—is considerably more vague than the Kennedy-Johnson "guideposts"; and it is not clear that the program commands any more widespread Government commitment than did the program of the 1960's—although I hope that I am wrong about this. On the other hand, the Council on Wage and Price Stability must supply considerably more and better staff support than we ever had in the 1960's. I am convinced that the guidepost effort of the 1960's had an appreciable effect in holding down the inflation rate, and I hope and expect that the Carter-Strauss-Bosworth program will also do so.

A second model, recently receiving much attention, is that of the tax-based incomes policy, usually abbreviated as TIP. The original TIP proposal, made some time ago and still advocated by Federal Reserve Governor Henry Wallich and Professor and Sidney Weintraub, calls for a tax penalty on employers whose wage rates rise more rapidly than a predetermined guideline.

Arthur Okun more recently proposed a tax incentive, rather than a penalty, to encourage compliance with the wage guideline. He also suggested that a similar scheme, applied to prices, could make sure that wage restraint was accompanied by price restraint.

The TIP model avoids many of the disadvantages of the jawboning model. Its necessary congressional mandate supplies political legitimacy. Labor and business leaders have the opportunity to become involved at least during the legislative stage. The Presidency is not demeaned by brawling confrontation with firms and unions. Instead of trying to persuade people to accept a responsibility that seems contrary to self-interest, each private group makes its own decision, taking account of the costs and benefits, including the tax costs or benefits,

of its decision. Also, there is no arbitrary or accidental selection of cases—except through legislation which exempts areas of the economy from coverage.

A series of papers about the TIP proposal, commissioned by the Brookings Institution, was recently discussed at length by a large group of economists assembled by Brookings. The papers and much of the discussion will soon be published, as I am sure you know. Essentially, I believe that, if TIP is confined to wages only, it is clearly preferable to the jawboning model, whether in the penalty or the incentive form. The incentive form is more attractive in many respects, but it has the disadvantage, which I consider serious, that coverage must be universal, which greatly multiplies the administrative costs.

If economists and legislators will put their minds to it, in full consultation with labor leaders and businessmen, it ought to be possible to work out a scheme which is both acceptable and more effective than jawboning. I particularly emphasize acceptability, for it seems to me that no noncompulsory incomes policy—indeed, not even mandatory controls—can be made to work unless those whose behavior is supposed to be affected accept it as fair and reasonable, and are persuaded in advance that it has a good chance of achieving a prompt and visible reduction in the inflation rate. I think that this requires intensive advisory involvement of business and labor representatives, both in designing the machinery, and in formulating the policies to be applied.

However, it is difficult to be optimistic about the chances for any effective attack on inflation under present circumstances. Perhaps things must get still worse before they can get better. In my view, inflation will not disappear without development of some substantial consensus about the nature of the problem, and the method for dealing with it. I see little evidence that any of the major parties that must necessarily be involved in a solution to inflation is ready to make the concessions—ideological, political, and economic, and I believe ideological is most important—necessary to achieve such a consensus among government, labor, business, and its many specialized communities: Farm, professional, financial, et cetera. Even within government, consensus seems increasingly difficult to achieve: Between executive and legislative, Republicans and Democrats, and liberals and conservatives.

Indeed, some observers find one important source of today's inflation in a deterioration of our general social consensus, and an increasing truculence which seems to prevail among all segments of our society. So far inflation appears mainly to aggravate that truculence, rather than to push toward consensus.

[The prepared statement of Mr. Ackley follows:]

PREPARED STATEMENT OF GARDNER ACKLEY

Once again our subject is inflation.

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"The problem of inflation may very well be our No. 1 domestic economic problem in the years ahead. Thus, I believe that the Joint Economic Committee can perform a great public service, through its present study and otherwise, in contributing to the public understanding of the nature and seriousness of the problem." [1]

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[1] "A Third Approach to the Analysis and Control of Inflation", in The Relationship of Prices to Economic Stability and Growth: Compendium of Papers Submitted by Panelists Appearing before the Joint Economic Committee, March 31, 1958, p. 633.

I wouldn't change a word of that today. Nor will I change very much of what I then went on to say about the nature of the problem and the means available to control it, and have continued to say at many Hearings in between.

In my view, our main inflationary problem is *not* the recent speedup in the inflation rate. Much of this speedup is accidental and transient; some of the rest was deliberately legislated, with full recognition of its inflationary consequences. I doubt that much or any of it is related to the decline in unemployment. Rather, the main problem is the persistence for ten years of a clearly unacceptable rate of inflation, and our unwillingness to understand the fundamental nature of this inflation and to consider reasonable means to deal with it.

When I say that some of the recent inflation speedup is accidental and transient, I refer, of course, to the spurt in food prices, which are highly variable, which dipped considerably (at the producer and processor level) during the latter part of 1977, and which are now rising rapidly again. But consumer food prices still have risen less than other prices since 1974; moreover, prices of food products at the farm and processor level have risen no more than other prices since 1948, since 1958, or since 1968. I do not expect them to rise faster than other prices between now and 1988.

When I say that some of the recent inflation speedup was deliberately legislated, I refer, of course, particularly to recent farm-price and minimum-wage legislation. The inflationary consequences of this legislation were well-known, and were presumably held to be of lesser import than the benefits expected to be achieved through these actions. The inflationary impact of recently legislated payroll tax increases is mainly still to come; but it, too, was presumably held to be worth its cost.

Frankly, I do not understand the sudden new increment of excitement and alarm about inflation recently expressed by the press and public opinion. (And I am not sure to what extent public opinion is merely reflecting the recent and sudden concentration of media excitement on this topic.) But whether the renewed alarm about inflation is mainly a "media event", or is genuine—and I hope it is genuine—it is important to focus attention not on the food-price sideshow but on the main event. This main event takes place in the dominant industrial and service sectors of the economy, where for ten years an inflationary spiral has been grinding on. During this decade, changes in the pace of the spiral have been associated mainly with controls (1971–72); with supply dislocations in internationally traded raw products (1972–73); and, of course, with independently determined changes in energy prices (1974 and after). At times—1967–69 (when the spiral emerged), and again in 1972–73—the inflation reflected excessive aggregate demand, the result of mistaken fiscal-monetary policies. On the other hand, the inflation persisted through two recessions, one of them the sharpest and deepest since the 1930's. On the average (whatever that means) aggregate demand has not been excessive; and it is not excessive today.

This inflation has increased neither the income share nor the real wealth of any broad class or sector of society; by the same token, it has reduced the income share or wealth of no significant class or sector. Mainly, this spiral—and our often inappropriate policy responses to it—has reduced the total income to be shared, and reduced our enjoyment of what we do receive.

In this spiral, firms in every sector and industry, in every trading nation, have been raising prices to reflect rising labor costs, and rising prices of goods and services purchased from other domestic and foreign firms, sectors, and industries. Each firm's material costs rise because its suppliers have raised prices of their products. Each firm's labor costs rise because its wage rates must follow rising wages in other firms, and must offset the effect of inflation on workers' cost of living. If only prices of goods used as materials would not rise so fast, prices of products would not need to; if only some wage-rates would not rise so fast, other wage-rates would not need to; if only prices of consumer goods would not rise so fast, wage-rates would not need to; if only wage-rates would not rise so fast, prices of materials and products would not need to. Final and intermediate buyers, at every stage, have been able to afford the higher prices and wages because their incomes, sales, or tax receipts are swollen by the same inflation that raises sellers' costs.

Thus, we experience inflation mainly because we have been and are experiencing inflation. That is what we mean when we call it a spiral.

How can we slow down this spiral? There are four general ways available. One is to adopt fiscal and monetary policies that will raise the unemployment rate: say, from 6 back to 7 or 8 percent. Economists of various schools, using various methodologies, have for a number of years been intensively studying the relationship between unemployment and the inflation rate. Their models differ consid-

erably. Yet most of their empirical estimates of the quantitative impact of higher unemployment on inflation fall within a fairly narrow range. Essentially, they imply that (in the United States) a one percentage-point increase in the unemployment rate (from, say, 6 percent to 7 percent), maintained for a year, would reduce the inflation rate at the end of that year by between 0.1 and 0.6 percentage points (from an inflation rate of, say, 7 percent to one between 6.4 and 6.9 percent). And real output—the total of goods and services available to share—would have fallen by about 3 percent.

Whatever his brave words, no political leader is ready to buy so modest a reduction of inflation through deliberate action to increase unemployment and to reduce production and real incomes. Indeed, so long as the unemployment rate stands as high as 6 percent overall (and up to 35 percent for significant groups of workers), he is not going to take any deliberate action to prevent the further slow decline of the unemployment rate. Nor should he. No sensible estimate of the costs of inflation makes that a worthwhile trade.

A second possibility is the use of direct wage and price controls. I hope no one is even thinking about using that method to break the spiral. I think that I have had as much experience with wage and price controls as anyone; and I know that their economic, political, and moral costs are not worth paying—unless or until the inflation rate, without controls, can reasonably be predicted to be very much higher than even the most pessimistic observers now foresee.

A third method would attempt a revolutionary recasting of our industrial structure and employment institutions in an effort to create everywhere the kind of effective competition that does not permit any price or wage to be raised so long as there are any idle workers or any unused industrial capacity. While there are a number of modifications that we might (and should) make in our legislation affecting competition in labor and product markets, which would have useful, if marginal, effects on future inflation rates, we would not be willing to pay the economic and social costs of a course of action sufficiently drastic to have truly significant effects on inflation.

In my view, only the fourth type of approach may be both feasible and acceptable: some form of noncompulsory incomes policy. This is what I advocated in my 1958 testimony before this Committee, and have continued ever since to promote.

There are several basic types or "models" of incomes policy, with, of course, opportunities for innumerable minor variations. The first model is that of an incomes policy enforced by "jawboning" and related forms of education, pressure, and persuasion. This is the form used in the "guideposts" effort of 1962–68, with the jawboning centered in the White House. It appears that the Carter Administration intends to conduct an incomes policy essentially of that kind. To be sure, its basic standard—"deceleration"—is considerably more vague than the Kennedy-Johnson "guideposts"; and it is not clear that the program commands any more widespread government commitment than did the program of the 1960s (although I hope that I am wrong about this). On the other hand, the Council on Wage and Price Stability must supply considerably more and better staff support than we ever had in the sixties. I am convinced that the guidepost effort of the 1960s had an appreciable effect in holding down the inflation rate; and I hope and expect that the Carter-Strauss-Bosworth program will also do so.

I have elsewhere outlined what I regard as the principal weaknesses of the jawboning model of the 1960s.[2] These weaknesses include:

(1) the absence of any significant "legitimacy" for the policy in the eyes of those most affected, which might have been provided either through the active involvement of leaders from the business and labor communities in advisory or policymaking roles, or through some legislative basis for the program;[3]

(2) the personal identification of the program with the President, or his alter ego, which has disadvantages both to the program and to the Presidency that I regard as greatly outweighing the advantages to either;

(3) the inevitable highly adversary character of the procedure, which is socially divisive and damaging to voluntary adherence;

(4) the rather hit-or-miss application to cases that happen to draw government or public attention; and,

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[2] For example, in "An Incomes Policy for the 1970's," *Review of Economics and Statistics*, vol. 54 (August 1972), pp. 218–23.

[3] The Council on Wage and Price Stability now at least has a legislative basis.

(5) the fact that the cooperation of a firm or union rests upon its acceptance of a social or political responsibility that is contrary to its narrow economic interest. To be sure, if compliance were general, the actual cost to each complying firm or union would be negligible. Even so, the paradox is that the greater the general compliance, the greater the individual economic advantage in noncompliance. I do not consider this as a necessarily fatal defect; but it must be recognized as a weakness.

A second model, recently receiving much attention, is that of the tax-based incomes policy, usually abbreviated as TIP. The original TIP proposal, made some time ago and still advocated by Federal Reserve Governor Henry Wallich and Professor Sidney Weintraub, calls for a tax penalty on employers whose wage rates rise more rapidly than a predetermined guideline. Arthur Okun more recently proposed a tax incentive, rather than a penalty, to encourage compliance with the wage guideline; he also suggested that a similar scheme, applied to prices, would make sure that wage restraint was accompanied by price restraint.

The TIP model avoids many of the disadvantages of the jawboning model. Its necessary Congressional mandate supplies political legitimacy; labor and business leaders have the opportunity to become involved at least during the legislative stage; the Presidency is not demeaned by brawling confrontation with firms and unions; instead of trying to persuade people to accept a responsibility that seems contrary to self-interest, each private group makes its own decision, taking account of the costs and benefits, including the tax costs or benefits, of its decision; and there is no arbitrary or accidental selection of cases (except through legislation which exempts areas of the economy from coverage or provides special treatment).

A series of papers about the TIP proposal, commissioned by the Brookings Institution, was recently discussed at length by a large group of economists assembled by Brookings. The papers and much of the discussion will soon be published, including some views of mine, which I only summarize here. Essentially, I believe that, if TIP is confined to wages only, it is clearly preferable to the jawboning model, whether in the penalty or the incentive form. The incentive form is more attractive in many respects; but it has the disadvantage that coverage must be universal, which greatly multiplies the administrative costs.

There are, however, other possible models, which might be preferable either to jawboning or to TIP. I have elsewhere described a model[4] which involves (1) a highly selective coverage of both wages and prices, (2) a legislatively established agency with substantial staff, essentially independent of the White House, having a number of specific but limited powers, including authority to require prenotification of increases, and to impose mandatory delays on increases that appear to be above its standards; and, (3) elaborate and extensive formal arrangements for the advisory involvement of representatives of labor, business, and the public. The administrative flexibility of this model permits easy avoidance of some of the economic and procedural problems that economists and others have found to be inherent in TIP. It also permits different and separate programs for particular industries such as trucking, construction, or medical care, which have special problems.

My proposal describing this particular scheme has been in the public domain for a considerable period—indeed, something like it was sketched in my testimony here twenty years ago. Since it has attracted little interest, this probably indicates that it is fatally flawed. I refer to it only to point out that the choice is not necessarily among jawboning, TIP, or nothing.

If economists and legislators will put their minds to it, in full consultation with labor leaders and businessmen, it ought to be possible to work out a scheme which is both acceptable and effective. I particularly emphasize acceptability; for it seems to me that no noncompulsory incomes policy (indeed, not even mandatory controls) can be made to work unless those whose behavior is supposed to be affected accept it as fair and reasonable, and are persuaded in advance that it has a good chance of achieving a prompt and visible reduction in the inflation rate. I think that this requires intensive advisory involvement of business and labor representatives, both in designing the machinery, and in formulating the policies to be applied.

However, it is difficult to be optimistic about the chances for any effective attack on inflation under present circumstances. Perhaps things must get still

[4] See "An Incomes Policy for the 1970's," pp. 222–23.

worse before they can get better. In my view, inflation will not disappear without development of some substantial consensus about the nature of the problem, and the method for dealing with it. I see little evidence that any of the major parties that must necessarily be involved in a solution to inflation is ready to make the concessions necessary to achieve such a consensus—among government, labor, business, and its many specialized communities: farm, professional, financial, etc. Even within government, consensus seems increasingly difficult to achieve: between executive and legislature, Republicans and Democrats, liberals and conservatives. Indeed, some observers find one important source of today's inflation in a deterioration of our general social consensus, and an increasing truculence which seems to prevail among all segments of our society. So far, inflation appears mainly to aggravate that truculence, rather than to push toward consensus.

Representative BOLLING. Thank you very much.

Our next panelist is Mr. Hendrik Houthakker, professor of economics, Harvard University. He is a graduate of the University of Amsterdam. He has been on the faculty of the University of Chicago and Stanford, and has been at Harvard since 1958. He was a senior staff economist from 1967 to 1968, and member, 1969 to 1971 of the President's Council of Economic Advisers. He is a past president of the Econometric Society.

We are glad to hear from you.

STATEMENT OF HENDRIK HOUTHAKKER, PROFESSOR OF ECONOMICS, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

Mr. HOUTHAKKER. Thank you. I am very honored to be here.

I am sorry I don't have a prepared statement. Unfortunately, I found I had to prepare my tax forms by June 15, which interfered with writing what I should have written for you.

However, I do have some thoughts which I will use here. In my statement, I would like to address longer term issues, in particular the relationship between growth and inflation.

This committee was set up by the Employment Act of 1946, and has long had a commitment to economic growth. The Employment Act, as we all know, did not say anything about inflation, and therefore, the question always arises whether it should say something about inflation and, if so, what is the relation between the two. This is one of the most difficult issues we face in economics. I think it is true to say that contemporary economics has not provided us with any final, or even tentative, answers concerning this problem of trading off growth and inflation.

Therefore, my remarks here are not made on the basis of any firm theory on the subject, because it just does not exist. Let me state in this context, my belief that economic growth is needed as much as ever, and does not necessarily interfere with the attainment of price stability. From empirical studies, I find it very doubtful that there is such a thing as a tradeoff between growth and inflation. Whether one looks at the U.S. national accounts over a long period of time, or at different countries and compares their performance with respect to inflation and growth, or at the different industries within the United States, one does not find that there is any great benefit to be gained by slowing down growth in order to slow down inflation.

Of course, this statement I make is subject to qualification. Very rapid growth rates may have inflationary consequences, but I do not think that in normal circumstances when we have a relatively moder-

ate growth rate, much is to be gained by slowing down the economy, because it just cannot be demonstrated that this in itself will lead to any great improvement—indeed to any improvement—in the inflation rate.

Let me elaborate particularly on one point which I just made, the comparison between different industries. This is something on which I have spent a fair amount of time, starting from the days when I was on the staff of the Council of Economic Advisers under Gardner Ackley's chairmanship. I spent a lot of time analyzing the behavior of different industries, and have recently taken up the subject again. Let me just take two examples.

When one tries to determine which industries in the United States have contributed most to growth and which have contributed most to inflation, one finds that the industries which have contributed most to real growth have contributed less to inflation, and conversely. One of the worst industries in this is the primary metals industry, about half of which is accounted for by steel. It is an industry which has had almost no real growth at all since the end of World War II, and which has had a very high rate of increase in prices.

In this case, price means something more technical than what we usually look at; namely, the so-called value price. This concept is needed for a comparative analysis by industry.

In the case of primary metals, we find that the contribution has been all to inflation and virtually nothing to real growth. On the other hand, there is another industry, one that does not usually come up in this context, the telephone industry. It has had massive real growth, and very little inflation. These are the two hallmark cases. There are many in the middle. The telephone industry, of course, is a very special case because it is a regulated monopoly.

Nevertheless, the main point I want to make is that, on the whole, the growth and the inflation are not inconsistent objectives, either on an aggregate or an industry basis. Indeed, this study strengthens my belief that a reasonable rate of growth is a major contribution to price stability.

Let me just interject parenthetically that I don't think we should slow down growth for environmental reasons either. I share the public concern about the environment. I also believe that nothing could be more to the environmental movement than a major slowdown in economic growth, because the first thing that will go by the board will be the environmental laws and rules. Some perhaps should go by the board, but many should not. The public does trend to blame environmental rules for some of our economic problems, and therefore, the environmental movement would not be very well advised to push a no-growth policy as a contribution to the environment.

Furthermore, I don't think that economic growth is consistent with the widespread concern about inequality and the distribution of income. There is, if anything, evidence that more rapid economic growth makes for greater inequality, not for less inequality, and therefore, we should not hesitate to pursue a policy of growth on those grounds, either.

Having said this, you will understand that the policy measures which I believe should be considered are those of emphasized growth of output and investment without at the same time causing increases

in prices. Indeed, I believe that a policy which encourages economic growth will on the whole have a positive effect on price stability.

There are, in particular, six policies—or groups of policy measures—that I would like to talk about. No. 1 is competition. No. 2 is competition. No. 3, by a curious consequence, is also competition. However, let me make it clear that Nos. 4, 5, and 6 are not quite competition in this sense. So there is some variety. Let me elaborate.

In the first place, there should be policies to foster and encourage domestic competition. Let me in this context compare two industries which have had an interesting difference in their recent histories.

One is the steel industry. The other is the copper industry. Both industries have traditionally been objects of jawboning, some of which I was involved with myself in the early stages of my career. The steel industry is in as bad a way as ever, if not worse. It finds itself unable to keep even with legitimate foreign competition. There is a great deal of concern about dumping. But the fact is that most of the dumping is regular pricing according to the rules of economics. There is certainly some dumping from the nationalized industry in Great Britain, but most of the imports do not involve dumping. They are legitimate competition from which the industry is now being protected at public expense. Yet, I believe the problem of the industry is not a problem of foreign competition, but a problem of its own inefficiencies and poor management.

As a professor, I hate to judge a businessman, because I have never had to meet a payroll. Nevertheless, I want to submit that the steel industry is not a well-managed industry, and one of the best contributions the steel industry could make is a rash of resignations by top executives. The steel industry is an industry that has not modernized its facilities for a long time. It has built exactly one major plant in the last 20 years. This is a record that must surely be unsurpassed by any major industry in the United States. That one plant, incidentally, is a relatively small one by international standards. The industry has not made any innovations in its products on a major scale.

The only idea of long-range planning one finds in the steel industry is to take the next plane to Washington and complain about imports. This goes on to this day. The steel industry is still an industry where there is very little price competition, and where the emphasis is on Government support, particularly against imports.

The copper industry, which is also in the same primary metals group, for many years was not a great deal better. I myself was chairman of a study group investigating copper in the early 1970's, and made some recommendations. I was also chairman of a group investigating steel a little later.

In copper, there has been one major change in competition that has been introduced very recently. Therefore, my colleague on the left, Mr. Meyer, has probably had to spend less time on copper than we had to do in past years.

What has happened is that Kennecott is now pricing on the basis of an open market; namely, the Commodity Exchange in New York. It is a major change which appears to be spreading, and which I believe promises to improve a rather poor price performance in the past. It is an important example of what should be done in steel, too;

namely, measures to strengthen competition. I don't believe that jawboning by itself will make a useful contribution. What worries me is that jawboning will amount to the endorsement of unnecessary price changes as we have seen in the last few days.

The Council on Wage and Price Stability recently said that a 3-percent increase was great. I don't think the Government should make such statements. They only serve to further reinforce the dependence of the steel industry on Government involvement.

The second type of competition that needs to be strengthened is foreign. It is very important that we not engage in a program such as trigger pricing for steel, or the long-range textile agreements, or the dairy and beef import quotas. All these contribute in the aggregate a very substantial amount to inflation. The interests they serve could be better served by improved efficiency and better domestic competition, including the weeding out of inefficient firms. That is very important. Bankruptcy is an essential part of capitalism, and should not be discouraged. If firms cannot make a go, they should go to the wall.

In this connection, I should also say that the trade negotiations that are in progress can be an important aid in the maintenance of foreign competition provided they give due regard to nontariff barriers.

The third area refers to competition in the labor market, and here I would just say that I am not against unions. I believe unions are a legitimate way for labor to defend its interests. Unions become questionable when they do primarily two things. The first is to restrict entry, in other words, to prevent willing workers from entering the industry. This has been a problem particularly in the construction industry, where there have been all sorts of rules for apprenticeships and so on, designed to make it more difficult to enter these unions, thus leading to higher wages and prices. Fortunately, in the last few years, the unions have had their comeuppance because of the spread of nonunion labor.

The other thing which unions should not be allowed to do is regulate technology. This has been a favorite tactic in many industries, including construction and printing. The longshoremen have also engaged in it. It is in my view, not a legitimate object from an economic point of view to bargain about technology. There are unions which have facilitated the introduction of new technology—the Mine Workers under John L. Lewis did with great success—although I am not sure it is that way under the current leadership.

The fourth area of policy has been alluded to by Gardner Ackley, and this is legislation. There is a great deal that can be done. Some years ago, at the request of Senator Proxmire when he was chairman of this committee, I submitted various legislative measures that could be undertaken. I have expanded on this with what has become known as a sacred-cow list. I am encouraged that some progress has been made in the field of aviation. There is much more to be done.

In the field of aviation, we have had an increase in competition, and there is a movement to lower fares, both domestic and international. This, I believe, is all to the good.

The fifth area I wanted to mention is taxation. Let me say first that I am not impressed by tax-based income policies. There appear to be insuperable obstacles in implementing them. For instance, Gardner Ackley has mentioned the possibility of applying the income tax only

to wages. I really wonder how Congress will justify this to its constituents and the unions. It is not clear to me how you can do it. Maybe it is my misunderstanding.

I don't see much promise there. However, there are other changes in taxation which, in my opinion, should be investigated. These have to do with the theme I mentioned earlier of emphasizing growth of output and investment.

A change I would particularly like to see considered further is an element of graduation in the corporate income tax. Graduation should not be by size of firm. There is no reason that I know of why small firms should be treated differently from large firms in taxation. I would like to see a graduation based on the rate of return to equity.

What has happened is that some firms, both large and small, have some degree of monopoly power as a result of an oligopolitistic or monopolistic structure in their industry. They make large profits which they do not use for investments, for fear of "spoiling the market." Therefore they are not expanding output. Such firms should pay a higher rate of corporate tax. Firms that earn only a competitive amount of capital because they expand when they have profit, should pay a somewhat lower rate of tax. This will often stimulate investment, because investment will be one way of lowering their tax rate by increasing the denominator in the rate of return.

So I believe an element of graduation in the corporate income tax would be a powerful tool for encouraging successful corporations more willing to invest, because by doing so they will lower their taxes. We will no longer have the phenomenon of certain large corporations, which I will not mention by name, amassing huge amounts of liquid assets which clearly are not a very good investment from the point of view of the economy as a whole, because they are unwilling to expand output for fear of eroding their market power.

Finally, I would like to mention one other point, which is also important in our predicament at the moment, and this is a matter of better bookkeeping. At the moment, our economic policies are being distorted by an antiquated accounting standard which is inappropriate for the inflationary period we have been in for a long time. The historical cost accounting that is regarded as the only acceptable form by the accounting profession leads to gross misrepresentation of the corporate results.

Recently, the Securities and Exchange Commission, and I commend them for it, has required publicly listed corporations to publish accounts on a replacement cost basis. These are, unfortunately, hidden in the 10-K reports which most stockholders never see, accompanied by management comments that "it does not mean anything, forget these figures." Why is this so? It is because these figures generally show much smaller profits than the traditional accounting statements. In fact, there are quite a few corporations where there is a loss on a replacement cost basis, even though there is a good profit on the historical cost basis.

There was a tabulation by Forbes magazine a few weeks ago which is very illuminating. It suggests that many corporations are not only fooling their stockholders, but also themselves, by their reliance on antiquated bookkeeping. They make wrong decisions because they fail to adjust to inflation. Their liquid assets erode, especially when

they pay dividends from nonexistent earnings. As a result, they are unable to make necessary investments unless they go in for heavy borrowing.

This whole question of accounting may be a question which the Joint Economic Committee should look at. It is not a subject that has had much attention, but it does play a role in the poor response of business.

I want to leave it at this. Thank you.

Representative BOLLING. Thank you.

Our next witness is Mr. Jack A. Meyer, Assistant Director for Wage and Price Monitoring, Council on Wage and Price Stability. He received his Ph. D. from Ohio State University. He has beeen in Federal Government service with the Department of Labor and HUD, and with the Council from September 1975.

We are grateful for your appearing here today. Please proceed as you wish.

STATEMENT OF JACK A. MEYER, ASSISTANT DIRECTOR FOR WAGE AND PRICE MONITORING, COUNCIL ON WAGE AND PRICE STABILITY, EXECUTIVE OFFICE OF THE PRESIDENT, WASHINGTON, D.C.

Mr. MEYER. I would like to briefly review some of the options facing the Government over the last few months as we have developed our inflation position. I would like to tell you about some of the problems, perhaps the rationale, and to explain briefly some of the basic aspects of our program.

As you know, a combination of events over the winter did cause a temporary increase in inflation. I agree with Professor Ackley's analysis of that. I think inflation will moderate from those levels somewhat. The long coal strike, and costly settlement, the severe weather, employment, taxes, devaluation of the dollar, and, of course, the food price situation, all contributed. While many of those were nonrecurring, or one-time events, I think they did stimulate a great deal of public interest and some media attention. The public has been sensitized to the more persistent problem of inflation, that it will not go down on its own.

We, in effect, have revised our forecast upward slightly, certainly not to the extent indicated by first-quarter figures, but there is some concern of an upward movement in the underlying rate of inflation.

The basic options facing us really left us little choice but to pursue a voluntary approach. First, we felt the imposition of mandatory price controls was unacceptable. If there is one thing we learned after the inflation of 1970, it is that we have chronic, long-term inflation. It has persisted over all phases of the business cycle. Our past experience has shown us that mandatory controls might help in the short term, but certainly only by pushing problems under the rug. Controls do not address the basic causes of inflation. We did not want to pay a high price 2 years from now for moderation today.

Our second option, the traditional approach of following demand restraint, also proved inappropriate for the reasons outlined in Professor Ackley's testimony, that the cost of price moderation is too high. It is possible through massive increases in unemployment to

bring prices down, but I don't think people want that. I don't think it would be responsible to engineer a recession in the mistaken hope that, though it did not do it last time, it would unwind the inflation this time.

Our final option involved the proposed tax-based income policies. On this approach, I guess I fall somewhere between my two colleagues, but more toward Professor Ackley. I think the idea deserves some consideration, and the administration has looked at this option. But I feel the substantive and administrative issues surrounding it are sufficiently great, that it would have been a mistake to opt for such a policy this year.

One problem involves the tax surcharge. I am quite concerned that it would be counterproductive to the extent that that tax is passed on. Others feel that using a corporate tax surcharge would obviate that. I am not sure. On the tax rebate, I am concerned about the magnitude of the rebate needed to encourage workers to give up a stream of future earnings.

So we opted, essentially, for a step-up in the voluntary approach, not so much out of an unflagging faith that this was going to work, but basically because the alternatives seemed too unpalatable. A voluntary approach is characterized by a number of problems or syndromes. I want to briefly touch on some of those, because they relate to the frustrations that I have seen in making a program like this work.

First is the "you lead, I will follow" syndrome. No one wants to take the first step. Now, this is understandable for fear that you will stick your neck out and the other guy won't. But it virtually brings the possibility of progress to a halt. I've found it very frustrating that business comes in and says, "If you get your own house in order, then we will." Labor comes in and says, "When business shows clear signs of moving, then you will get our help." We feel you have to have an effort in which everyone moves together. The Government should take the lead. In the past, the problem has been that the Government has not led.

A second problem is the tendency to view the Government as the culprit. There is an overriding feeling that Government is the sole cause of inflation. I find that as misleading as the opposite view. Government does play a major role, but I think there is incredible emphasis on the Federal deficit to the exclusion of other things. That is unfortunate and, ironically, it diverts people's attention from many of the other inflationary things that the Government is doing.

The whole regulatory area is very important, yet it is often not discussed because of the fixation with the level of the deficit. I think we have to get it down, but I don't think we should pretend this is the sole basis of our problem.

Third, there is something Professor Houthakker commented on. He is quite right, that there is a problem that each day some special interest group comes in and makes a very convicing argument why they should have some relief from you people or from us. They ask for import quotas, a tariff, a subsidy, an increase in prices. Technically they can demonstrate, or we cannot demonstrate the opposite, that the inflationary consequences of that one action are relatively small, and the reward to them is relatively great. Many persuasive cases are brought to you and to us on a month-to-month basis. It is very hard

to say no to them. But the problem is the agglomeration of these concessions or of saying yes, when it is prudent to say no. When aggregated these do impact on inflation. The farm bill proposed this spring on steel import protections are illustrations of this type of problem.

Therefore, I might just add, that while I agree with Professor Houthakker about steel, I think the problem is not so much one of incorrect policy, but incorrect legislative provisions, which essentially prohibit marginal cost pricing, and give the Government no choice but to outlaw it.

Our final problem is the tendency to look for a quick fix. One of the fundamental difficulties of a voluntary program, as Professor Ackley mentioned, is its reliance on public cooperation and a sense of social responsibility which are hard to achieve.

People get frustrated. If they don't see quick results, they begin to look for alternatives which promise action. We witnessed this in 1971. There was a tremendous clamor then to get into controls. Once we were in, there was a tremendous clamor to get out. I think we have to avoid looking for a panacea. Our attack ought to be characterized by three words: Balance, equity, and gradualism.

We need balance in the sense that we have to steer that tough course between overstimulating and understimulating the economy.

Second, we need equity for reasons that have been stated. People will not cooperate if they feel they alone are carrying the burden.

Third, I think gradualism is needed. Nowhere is that better shown than with the deficit. We need to get it down but to take precipitous action be counterproductive.

What are we doing? We have taken some steps in the budget which I are headed in the right direction. In the last few weeks, I think you have seen clear evidence that the administration is thinking and rethinking about the problem of inflation, and is determined to improve our situation.

With respect to regulatory analysis, we are making a more determined effort to assess the cost implications of proposed regulations before they are implemented, not by sacrificing a goal, or giving up on a regulatory area, but by making sure we have the most efficient means of getting to our goals.

We are trying to practice what we preach. We feel if we are asking the private sector to hold down their wages, we must also hold down Federal wages. The President announced his intention to do just that.

With reference to procurement, we are trying to shop wisely in the marketplace, just as any other consumer would. I think such an approach is appropriate.

I don't feel any solution will be easy or simple. I think we have to convince people that the Government is taking steps that will make things better, so as to lower their expectations, and make it more reasonable to ask them for a contribution.

That is what we are trying to do. I don't know if we will succeed. But if we don't see some results in the latter part of this year, we will see a slowdown in the economy. People will be hitting the bricks, and we will be right back to the roller coaster of inflation and recession. I hope we get cooperation. I think we are beginning to move in the right direction, but we have a long way to go.

[The prepared statement of Mr. Meyer follows:]

Prepared Statement of Jack A. Meyer

RECENT DEVELOPMENTS

Over the past six months several developments have led to a heightened concern with inflation. The coal strike and unusually severe winter caused many plants to slow down or shut down completely, contributing to a decline in productivity. The subsequent coal settlement raised costs directly and set a dangerous precedent in collective bargaining. The devaluation of the dollar led to rising prices of foreign goods which in some cases provided room for price increases for comparable domestically-produced goods. Food price increases were sharper than expected, particularly for meat products. Although food price increases should moderate in the second half of the year, we will continue to feel the impact of the first-half spurt, as the unusually large CPI increases in recent months translate into larger escalator wage payments for many workers.

In January, legislated increases in both the minimum wage and Social Security taxes led to an unusual jump in labor costs. Compensation gains of large unions in recent years have substantially outpaced the gains of the average worker, and in recent months tightened labor markets and catch-up forces have put upward pressure on the wages of smaller unions and nonunion workers.

GOVERNMENT OPTIONS FOR REDUCING INFLATION

Government policy options can be broadly placed into four categories—controls, tax incentives, demand restraint, and a voluntary approach. We could seek authority to impose mandatory wage and price controls, but controls provide no solution to a clearly long-term, chronic problem. Controls can only bring short-term successes which will prove ephermeral and costly over time. They cause misallocations of resources, shortages, and distortions in wage and price structures.

Another option is a tax-based incomes policy, which uses federal taxation as a means to penalize or reward those who are in violation or support of wage and price guidelines. Various proposals involving a tax incentive approach hold some promise and deserve careful study, but at the present time there are sufficient substantive and administrative concerns about these proposals to make their immediate adoption unwise.

We have also rejected an approach to fighting inflation that relies heavily on demand restraint. Inflation has persisted in recent years despite considerable slack in labor and capital markets, and there is no reason to believe that a policy of continued slack will achieve in the future what it has not been able to achieve in the recent past. We are not going to engineer a recession in the false hope that it will end the inflation.

We have, therefore, opted for a voluntary program aimed at individual markets, with the recognition that any overall moderation will occur only if deceleration is achieved on a widespread basis. We seek cooperation from business and labor, as well as a heightened government awareness of its own contribution to inflation. We are not asking for every industry or union to meet pre-determined guidelines, but rather for a steady deceleration by each group from its wage and price gains in the recent past.

PROBLEMS CONFRONTING A VOLUNTARY APPROACH

The approach we have taken is not without problems. A characteristic of a voluntary program is the "You lead—I'll follow" syndrome. Each group wants to wait for others to take the first step, and in consequence, no progress is made. In recent weeks some representatives of organized labor have pledged to moderate wages after a deceleration in prices is established. Labor has a legitimate claim that business can always raise prices regardless of its lipservice to a voluntary program, while most unions are tied to two or three year contracts. But, business will not be able to do its part unless unions recognize the circularity of their promise. Deceleration depends on a joint, simultaneous effort.

A second problem confronting a voluntary approach is the uncertainty and confusion about the role of government. Government is mistakenly viewed by many as the sole cause of inflation; this notion can become an excuse for inaction, and is just as erroneous as the naive view that government has little, if any impact on inflation. And, ironically, at the same time as many in the private sector are criticizing government interference, various groups within the economy are asking for relief from import competition, for subsidies, for price floors,

etc. Thus, paradoxically, those who view the government in the aggregate as the culprit in the inflation process often encourage government interference on a case-by-case basis to deal with their own "exception," "anomaly," or hardship.

The preceding problem is related to a common misunderstanding about the impact on inflation of meeting each individual interest group's particular concerns. This misunderstanding involves the fallacy of composition. One of the biggest impediments to reducing inflation is the fact that as individual issues with inflationary consequences are weighed, these consequences often take a back seat to the desire to protect the concerns of various special interest groups. In each individual case, the immediate impact on inflation of any one program appears negligible—it may add one or two tenths of a percentage point to the overall price indexes. And so the program is approved. But the wish list is long, and each group can make a good case why it would suffer irreparable harm if its interests are turned back.

The aggregate impact of all of these well-intentioned concessions will add significantly to inflation. Only by tackling these issues head on—and by a willingness to say "no" or "not this year" when it is tempting or politically expedient to say "yes"—can we make real headway against inflation.

This is not to say that reducing inflation will take precedence over our other objectives. I truly believe that a successful anti-inflation policy will make it easier to work to reduce unemployment. But as we make choices concerning new proposals, we must be very conscious of their cost and undertake only what we can afford.

Another problem confronting a voluntary approach involves holding off pressure to find a quick-fix for inflation. Some of the policies mentioned earlier may provide a quick but quixotic solution to the problem of inflation. The chronic nature of the current inflation demands a more gradual approach. A rapid retreat from economic stimulus or another round of controls will put the country back on the roller coaster of inflation and recession.

In coping with these problems associated with a voluntary approach, we have tried to develop a program that is characterized by balance, equity, and gradualism.

We have to strike a balance between too much stimulus and too little, to keep the expansion going without adding fuel to inflation.

The potential for the success of a voluntary program hinges on the degree to which it is perceived as equitable. Inflation cannot be beaten unless each sector is aware of its contribution to inflation, and willing to share in the sacrifice necessary to unwind it.

And it is important to be content with gradual progress so that such progress is sustainable.

THE DECELERATION PROGRAM

Our deceleration effort involves criteria for wage and price behavior, as well as a program in which the federal government takes the lead in the anti-inflation effort.

The Administration has taken several steps designed to reduce the rate of inflation.

We are committed to maintaining a responsible long-term budgetary policy that balances the concern for sustaining strong growth in employment with the need to avoid sudden and excessive surges in aggregate demand relative to the available supply.

The Administration will strengthen its review and analysis of the government regulatory process to simplify procedures and assure that the objectives of the regulations are achieved in the most cost-effective fashion.

We will practice the wage moderation we seek from others. We have announced our intention to hold the increase in Federal white collar pay in 1978 to 5.5% not only to comply with deceleration, but also to point the way to others.

We will use federal procurement policy to foster deceleration. Where possible the Federal government will avoid or delay the purchase of highly inflationary goods.

The Administration's tax program would significantly expand incentives for capital formation as a means of sustaining the expansion and promoting the growth of industrial capacity and productivity.

The Congress has been asked to approve a hospital cost-containment program to restrain the extremely rapid rise in medical care prices.

The nation's grain reserves will be expanded as a protection against future supply shortages.

But while the government can take the lead in the fight against inflation, it cannot solve the problem alone. The cooperation of business and labor is essential to a successful effort.

We are asking business community to publicly commit themselves to our deceleration standards. We believe that the avoidance of a single number or yardstick and the emphasis on steady, gradual deceleration will make it possible for most major American corporations to support our efforts.

We are asking individual firms to calculate the average rate of price increase over the last two years, and to make a commitment that price increases in this calendar year will be significantly less than the average of the last two years. We have an overall industry goal of annual deceleration in the range of one-half to one percent, but we intend to view each industry flexibly.

On the wage side, we must bring down the pattern of 9–10 percent per year increases in total hourly compensation that characterized the 1976–77 wage round among major unions. We cannot afford to let this pattern become even more pervasive as labor markets continue to tighten.

There are approximately one million rail and postal workers currently negotiating new agreements, and nearly another one million workers bargaining this year in industries such as paper, cement, retail food, airlines, and construction. To let these settlements slip by would set a bad precedent for next year's negotiations. Even though the groups that are negotiating now do not receive the amount of national attention devoted to truckers or autoworkers, their negotiations are important to the inflation battle. Large settlements in smaller bargaining situations can have very negative effects.

Representative BOLLING. Senator Hatch, would you like to start.

Senator HATCH. I enjoyed all three witnesses here today.

If I understand you correctly, Professor Houthakker, it is the tradeoff between inflation and growth—if you cut marginal tax rates to encourage production, we get a lower tax rate, more goods, less inflation.

Would you agree?

Mr. HOUTHAKKER. Yes, I agree with one qualification: If you are talking about high growth rates, or very low ones, then you may see some tradeoffs.

But in the range between zero and 5 percent growth, there is not much tradeoff.

Senator HATCH. What I am concerned about in Mr. Meyers' remarks is that inflation is cost-push. Cost-push is basic nonsense.

Suppose, for example, that everyone agreed not to take a raise for a while, but the Federal Reserve Board continued to pump money in the economy. Don't you agree with me that if the ratio of money to goods rises, then prices will rise, no matter what else you do, or no matter how good management and labor are trying to be to hold the line?

Mr. MEYER. I would not disagree with your statement, but I would disagree with the premise that it is impossible to understand how we could have a cost-push situation.

We have inflation at 6 to 6½ percent for 3 years, and we have not had excess demand. We have had capital utilization in the low eighties. We have had high unemployment and yet inflation persists.

What possible explanation for that could there be? This is not to say that all of the cost-push factors of our current inflation have been domestic. Many have been foreign; the oil situation, for example. But it is not so much related to the underlying strength of the economy.

We have not had the——

Senator HATCH. If the Federal Government does not print the money

to control cost-push factors, the competitive sector will not support the prices.

Mr. MEYER. That is true, and we could be right back in a recession.

It is possible to conduct monetary policy to insure that we will not have inflation. But I believe the social cost of such action would be sufficiently great to offset any gains on the inflation front.

I think we need a responsible monetary policy. But I don't think it by itself can be expected to end inflation.

Senator HATCH. But inflation is discouraging savings, and we are overtaxing production. This is one of the problems we are having.

That seems to be what is causing a lot of our problems.

Mr. MEYER. I would agree. I think we need tax incentive for savings and investment.

Senator HATCH. You seem to claim that the public is responsible for inflation. Maybe I misunderstood you. I think the Government is responsible for printing more and more money, and flooding the market, which some people feel is a good idea, in order to increase tax dollars.

The administration thinks that the Congress is spending like there is no tomorrow. I tend to agree with the administration's appraisal.

Mr. MEYER. I think that the blame has to be shared. It is not simply a matter of printing too much money, as you also have a problem with contractual wages, and the Government spending. These in combination with the sluggish productivity have also been causes.

Monetary policy may also contribute to inflation, but in a more complex way than your statements imply. I certainly agree that we need to keep Government responding.

Senator HATCH. There is some criticism of Mr. Strauss as to what happened with regard to the railway situation. Could you comment about that?

If there ever was an example that jawboning does not solve a problem, it is that.

Mr. MEYER. It could be.

We have been very reluctant to move in the last few months from a position of noninterference—total noninvolvement in collective bargaining, to a position where we feel we have to comment publicly about the course of negotiations in areas such as the railroads.

We have received reports that the rail negotiations are going badly in the sense that they were moving toward a substantial wage settlement without much progress in the area of work rules.

We see this as very damaging to our efforts. It is possible that we sometimes make things worse. But we feel we can no longer sit on the sidelines and watch these high settlements rolling in.

Senator HATCH. I want to compliment you and Mr. Bosworth. I think we have to have people telling it the way it is.

I read the Wall Street Journal yesterday, a recitation of the comments of Mr. Bosworth with regard to his fear about recession.

The article went this way: The article repeated his prediction that the country is headed for a recession unless inflation is brought under control.

He said, "I give the economy no more than 6 months. If we don't do something on inflation this year, we are going back into a recession."

I think he has a lot of support for that statement. But then he does stress that he did not mean to predict a recession by saying, "I don't know about the timing." But he also said, "The country is very clearly making absolutely no progress against inflation."

He urged voluntary restraints on wages and prices, which we have some evidence against, and he characterized as nonsense statements by George Meany and others that labor will wait to see if prices moderate before trimming wages.

Labor accounts for 85 percent of the gross national product, while business profits recently were 10 percent of the total goods and services. Actually, I think it is 9 percent, about $140 billion.

He said there is no way you can work on inflation by working on the 10 percent alone. Would you agree?

Mr. MEYER. I would. We'll have problems if we don't do something to break the 30-percent-plus pattern of major settlements. These large settlements will set off catchup demands from smaller labor unions and then any efforts we make from the Government side will be futile.

Senator HATCH. What is occurring is that labor is breaking through the inflationary barrier in order to keep up, as they are pushed into higher tax rates, and into higher marginal tax rates. Labor is breaking through, but business has not been able to keep up, via higher productivity, savings, expansion, and investment.

So business seems to be falling backward, where it might not be able to expand.

The steel industry may be a prime example. I don't think we have any different regulations with regard to the steel industry, which I agree with Professor Houthakker, they brought on themselves. We are at the point right now where we have a wage-push that is second to nothing that has ever happened in our society.

Right now we have the Labor Reform Act this year, which is the current business on the Senate floor. This legislation—and I don't think anyone will disagree with this statement—will make it easier for unions to organize.

Representative BOLLING. I would disagree.

Senator HATCH. I have not had any——

Representative BOLLING. I would change the word. I would make it, fairer.

Senator HATCH. You and I would disagree on that.

Representative BOLLING. Clearly. I just want to stand with that.

Senator HATCH. I violently disagree. A noted economist has analyzed that 10-percent increase in unionization—of course. Mr. Chairman, in all respect to you, and I do respect you, making it fairer does not necessarily deny my statement that it will make it easier.

Representative BOLLING. I just wanted to make the point. Fairness is part of the problem.

Senator HATCH. Let's assume that you are correct, for the sake of our argument here. But you will agree that it will make it easier.

Representative BOLLING. It will simply make it easier for the law to prevail. I regret that you decided you were going to bring what is on the Senate floor into this hearing. That is your privilege, and I don't propose to try to stop it. But I will not sit and listen to a particular point of view, overcome a discussion that I thought was going

to be interesting and useful, and that did not take a particular point of view.

Senator HATCH. Let me point this out to you.

Representative BOLLING. You have a perfect right, and you may turn out to be right. I want to get the discussion back to something that resembles the purpose of this panel.

Senator HATCH. Inflation.

Representative BOLLING. No, no. The purpose of this special study, which you cooperated in bringing into being, is that we are trying to look at the long range. We are not trying to look at the contest of the day.

Senator HATCH. I would be happly to make it very clear, that this is something of inestimable importance, and I have a right——

Representative BOLLING. I didn't question your right.

Senator HATCH. Especially since we are discussing inflation.

Representative BOLLING. But I do question the forum. I think we have an opportunity for a discussion where I will not express my views on the bill, and you would not, simply because it interferes with getting toward the kind of truth that Professor Houthakker is talking about, and that leaves out politics.

He makes it very, very clear. I am not questioning your right. You have every right in the world. I am questioning the point of this committee getting involved in that conflict, in terms of our long-range study.

Senator HATCH. Let me break that conflict down, because it is important. And let me break it down to what you would like, and that is the pertinence of this particular question.

Mr. Rinfret has analyzed the 10-percent rise in unionization, which I believe will be easily achieved if this bill is enacted, and will lead to additional 3-percent inflation. I don't know anything that would be more pertinent.

Do you agree with Mr. Rinfret?

Mr. MEYER. I have not had a chance to study the work in detail, but I think it is probably an overestimate. To say that the bill has no inflationary implications would be wrong.

I think individual items of the bill should be considered for their inflationary aspects. But my recollection of studies of the impact of unions on overall wage levels, going back to 1963, is that the spillover effects are minimal, both in the public and private sectors. There are many steps you have to go through from a speedier election to who will win that election, to what will happen if someone wins that election.

I am not convinced that the bill will be wildly inflationary at all; however, it has the potential to be inflationary.

Senator HATCH. I don't think he made the point that it would be widely inflationary, but it would translate to at least up to 3-percent rise in inflation, which would put us into double digits.

If he is correct, and I think he is——

Mr. MEYER. Perhaps my other colleagues could comment, but I don't know.

Senator HATCH. I would be happy to hear from you.

Mr. ACKLEY. There clearly is a relationship between the bargaining

strength of trade unions and the level of cost-push inflation in the economy. I have no doubt about that.

I think it is hard to pin down and quantify. I suggested in my prepared statement one of the ways we might try to attack inflation is through changing our institutions. However, in order to control inflation that way, I think we would have to change a lot of our institutions very drastically, in a way which would restore the perfectly competitive economy of the textbooks, in which indeed, the regulation of money supply would determine whatever degree of inflation or stability we might have.

All inflation would then be due to mistakes in monetary policy.

To be sure, I don't know enough about the particular details of this bill to have any view about what is involved. However, to say that relatively minor changes in labor legislation can have an important inflationary consequence, I would regard as probably being an extreme statement to which I would not subscribe.

If you were proposing to repeal the Taft-Hartley Act, and break up unions, I think it could have an important effect. I don't think we are ready to do that. I am not.

I think that unions undoubtedly fulfill important political and social needs, and I don't think we are going to change that.

Senator HATCH. I agree with you. I think they do that.

Mr. HOUTHAKKER. I think it all depends on what unions do. I don't think that by itself making it easier to organize textile workers will have any major effect on wages.

I believe other things that have been proposed would have a major effect. For example, there was a common situs bill which was vetoed by President Ford and rightly so. That bill would have had a very inflationary effect. There are things in the present law which in my view go further than is necessary for adequate representation, thus having an adverse effect on prices.

Senator HATCH. You mentioned one thing, and it is important to me, and to this discussion.

You mentioned, Mr. Meyer—and I will quit my questioning at this point—that you were concerned somewhat about the make-whole remedy. I do personally feel that that is a very difficult remedy. I feel it is the worst part of this bill.

Would you care to comment on why you are concerned about that particular provision. I think that anybody who has any regard to the problems of inflation, as affected by labor-management relations, would also be very much interested in that.

Mr. MEYER. Certainly.

My concern is with the wage formula. The last time I looked at it, the formula tied wage and benefit increases that would be granted to workers, after unfair labor practices have been found, to the BLS measure of wages and benefits for unions with 5,000 or more workers.

In the winter quarter, that measure went up over 14 percent. Admittedly——

Senator HATCH. 14.6 percent.

Mr. MEYER. I am concerned about two things: One is that we already have enough problems with these major settlements coming in high without tying other people automatically to them.

Second, I am concerned that it would be a floor in bargaining, that you will essentially penalize people if you bargain fairly. I am concerned about the incentive effect it would have. As I said, I think the bill's provisions have to be analyzed individually. I support the overall thrust of the legislation, because I feel it remedies situations which need to be remedied, and I don't think it will necessarily be a strong, inflationary force.

Senator HATCH. For your knowledge, with regard to that, there is an amendment on the floor, in all fairness to you, where they would tie it not to the BLS high wage rates, with union, with more than 5,000 employees, but to the employment cost index.

They felt that would be more equitable, and have less inflationary impact.

Mr. MEYER. That is a possible improvement, but it is still a concern to me.

I am not sure I'd want to tie wage settlements to any index. I am not sure why they don't have an incentive, instead of essentially giving workers somebody else's average, in the case of noncompliance.

What I have seen is that it has been more troublesome. You have a situation of nonunion workers catching up, and union wages not coming down.

Senator HATCH. It is very difficult to ascertain. I think that is a pretty important aspect, even though perhaps my distinguished chairman and friend would disagree with me. I think inflation causes unfairness, because it overstates profits by about one-third, about $20 billion a year, and it forces workers to demand wage increases of 20 to 40 percent higher.

Would you agree or disagree with me on that?

Mr. ACKLEY. I think the point Professor Houthakker made about the nature of accounting is extremely important. I think this is one of the real ways in which inflation does its damage.

Unfortunately, I am not as optimistic as he is that there is an easy way to get rid of these problems. Conventional accounting does assume, implicitly at least, a stable price level. Once prices change, then conventional accounting produces all kinds of distortions, not only in the treatment of assets, which he refers to, but also on the liability side.

You can argue that you also need to adjust to take account of the fact that the debt which the corporation has will be repaid in dollars of less purchasing power.

Once you start to make all of the inflationary adjustments, you really get screwed up. The problem is that there is no reasonable accounting in an inflationary world. I think we should make such adjustments as we can to take inflation into account, but we still have the problem.

But I would hate to decide that we can patch up our accounting and that this will take care of the inflation problem. Then we will start escalating everything else to adjust for inflation.

I think as long as we have inflation, we will have distortions in accounting, and distortions in decisions all around, which are part of the costs of inflation. We ought to be aware of them as much as we can. I think it is useful to try to make clear what the distortions are. One of the very important ones is overtaxation of profits.

Mr. HOUTHAKKER. May I just make two points?

That $20 billion is probably an underestimation. I would put it higher than that.

In the second place, although I am pleased Professor Ackley recognizes the problem, I don't think it is an insoluble problem. It will call for some fundamental data search. I would suggest that the JEC get the accounting and security analysts and tax lawyers to consider it.

There is one major change which will have to be made; that is, to recognize capital gains and losses on existing assets and liabilities. That is not done at the moment in corporate accounting, because the tax laws do not make the distinction; and once you do that, I think you will have a framework in which you can get reasonably accurate accounts, better reports to shareholders, and hopefully, also more realistic taxes on what are really profits, and not just windfall gains.

Senator HATCH. Thank you, Mr. Chairman.

Representative BOLLING. Certainly, Senator.

I would like to clarify my own position.

Senator HATCH. I apologize.

Representative BOLLING. You have no reason to apologize. You are within your rights.

But I would like to clarify my reason. It is very simple.

I have been in the House for some time, and I have been involved in most of the major legislation for quite a long time.

One of the things that has worried me about the Congress in its effort to improve its performance has been that it has a chronic failure of always dealing in whatever it does as an immediate matter with little attempt to look ahead.

The only purpose of a special study which would require extra money beyond that of the normal JEC budget, was to attempt to go a step or two beyond the notion of dealing with the present.

I have been lucky, I suppose, in that we have had a large number of hearings so far, and we have managed to stay away from the current conflicts in either Chamber.

I was really making sure that we did not get into the current debate which is taking place on the Senate floor.

Senator HATCH. I was getting into the future.

Representative BOLLING. Our dilemma is that we are very good with dealing with the current, with the problems on the floor, but we are terribly deficient in dealing with the future.

Senator HATCH. I think that one of the big problems of Congress has been that we don't consider the future impact of issues before us as well as we should.

In this particular case, I knew that the question was very pertinent.

I led into it with Mr. Bosworth's comments, that if we don't do something about the wage-price push, we will not be able to solve any problems.

That may be the whole guts of this conference. But I apologize.

Representative BOLLING. But the point I was making is that I could argue that into the ground, and I am not a professor of economics. There has been a remarkable lack of discussion regarding the increase in the cost of energy that took place in 1973, and Lord knows, how much American companies were involved in that.

Certainly labor was not. I don't want to get into that type of dis-

cussion. It is simply not pertinent. I think we can talk about the issue without getting involved in the current legislation.

Senator HATCH. I respect your position. Of course, I must take my own position.

Representative BOLLING. I respect your determination.

I would say, between us we have, as Professor Ackley said, an increase in truculence.

Congressman Long.

Representative LONG. Thank you, Mr. Chairman.

Mr. Ackley, I have listened to your responses, and I have also read your prepared statement. I have concluded that you have the feeling we have been dealing with the symptoms, rather than the problem.

Is that a fair conclusion on my part?

Mr. ACKLEY. It may very well be.

Representative LONG. I don't mean here today. I mean during the last 20 years, perhaps even before you wrote the statement with which you opened your remarks.

Mr. ACKLEY. I'm inclined to believe that the inflationary bias in modern economy goes very deep into its structure, and that is not anything that you can fix by adjusting this, or that, or some other thing. It is very deeply rooted in the way our labor markets are ordered, in the way they function, the way our business practices and pricing practices and managerial attitudes result in the adjustment of prices to changes in costs, and of wages to changes in prices. This produces the kind of inflationary bias which affects all of the industrial countries, and which we have been trying to deal with largely by adjusting aggregate demand.

Mistakes of demand management have also contributed to inflation—clearly the mistake of fiscal and monetary policy following 1965, and again in 1972 and 1973. The oil increase contributed even more. There are all kinds of things that have happened to cause costs and prices to rise. But our economy is such that nudges in the inflationary direction create not just one-time increases in the price level, but in addition, continuing inflation; while nudges in the deflationary direction don't stop an ongoing inflation.

I guess weare condemned to dealing with symptoms rather than causes unless we want to completely reorganize our economy.

I don't think we do.

Representative LONG. Isn't that part of it? The inability, not only to recognize the seriousness of the problem, but also the sacrifices and the basic changes that are going to have to be made in order to get the problem in hand?

Mr. ACKLEY. I said it. I agree with it, yes.

Representative LONG. I agree with the general statement with which you opened your remarks. Even if you take out the word "domestic," and even if you take out the word "economic"—that is, perhaps inflation may be our No. 1 problem, period. Technology, of course, is a related problem.

Let me apply a little practical politics, and share with you my limited experience in the events of the United States, and my participation, small as it may be. Timing becomes immensely important. Let's examine the lack of importance of the media events you described today, together with your hope that concern about inflation is more sub-

stantial, and not just a media event; that it, hopefully, reflects an increased awareness of the problem. If you take a media event and use it for constructive purposes—for education, and an increased awareness—and, perhaps, turn it toward a more constructive use than the sale of soap on television or Hershey bars in the newspapers or used cars in the classified section of the newspaper, sometimes that media event has very strange effects and very strange results.

Would it make any sense, at this time, to attempt to use the attention that is now focused on the problem to make a major step forward in terms of education? Should we not attempt to educate, particularly those who are responsible for the development of inflation to the extent that it has developed? This is, to some degree, what Chairman Bolling and the committee were attempting to do with this problem even before it became a media event. I am talking about a forum at the national level, as a first step—a summit-type forum—which would call attention to the basic nature of the problem.

Could anything at all be accomplished by this? I am afraid, as you are, that for more than 20 or 30 years, few people have recognized the basic nature of the problem. The remarks of the Senator, the remarks of Chairman Bolling, and the comments of all of us participating here today, in most instances, seem to indicate a recognition of the basic problem. Yet, the matter has not really gotten the attention of those who ought to have been giving it attention, or at least not a sufficient number of us to be able to attack the problem at its root causes, rather than with its symptoms.

Mr. ACKLEY. I certainly agree with almost everything you have said. Didn't President Ford have some kind of economic summit in which he invited all of the top economists to come to the White House and talk about inflation? Whether that achieved anything or not, I don't know.

Representative LONG. I called one of the staff members over to ask him whether my memory was faulty, and whether anything like this had been tried. Have we ever focused the attention of the people wh have the responsibility to address this major problem in America, to the degree that the seriousness of the problem justifies?

His point was that nothing could come to mind that was of sufficient importance that had been done in that regard, and nothing has come to me either. The very fact that you have an unclear recollection of President Ford having done something, like calling some people to the White House, pretty well proves my point.

Mr. ACKLEY. I think it is very possible that a major initiative of a series of governmentally sponsored—I started to say "presidentially sponsored," but perhaps also or instead congressionally sponsored forums, discussions, of inflation might contribute something. I happen to think that the only really effective way, unless we want to revolutionize our society, is to move along the general line of incomes policies, that I have referred to in my prepared statement. That does require the conscious participation and involvement particularly of the segments of the economy that have the power to do something about it; namely, unions and businesses.

Perhaps there is some way in which their responsibilities and the opportunities available to them can be brought home by an event or a series of events. I don't know. I have not thought about it. I think

that getting economists together probably does not help very much.

Representative LONG. I should think that is probably right.

Mr. ACKLEY. You are required to give people of all persuasions an opportunity so you don't neglect anyone.

Representative LONG. I would be the last to suggest a meeting of economists.

Representative BOLLING. I am not sure I am going to suggest that. I have been presiding over a series of meetings with economists and I think they have been very useful.

Representative LONG. I know you well enough so that——

Representative BOLLING. Of course, I have politicians here also.

Representative LONG. And we have a great responsibility to address this problem. Thank you; that's all that I have.

Representative BOLLING. I would like to pursue with Professor Houthakker his emphasis on competition and that is not necessarily his description of the three competitions, but I believe very strongly in competition. I tried to educate myself 15 years ago on competition in free societies. I would not say that it was perhaps as thorough a lesson as I got very early on when I was on the successor to the committee, before the Joint Economic Committee, on the relation between the Treasury and the Federal Reserve Board, but it was a substantial self-educating effort. I came to a very discouraging conclusion which has been somewhat modified by simply listening to you this morning.

You evidently believe that in this economy, and in this society, it is possible to restore full competition, including the international aspects on basic industries like steel.

I agree with every word you have said about steel. One of the things that has interested me in labor-management relations is for a very long time there were periods when the union was co-opted by the management's backward view of what is progress in their own industry.

Do you really seriously believe that in a basic major industry, which is relatively closely held, not monopolistic like steel or energy, that there is a real hope of getting competition restored?

Mr. HOUTHAKKER. Yes, I do. I think the difficulties are considerable and they are partly of a legal nature, in particular antitrust laws which are apparently not very effective in dealing with this. But I don't think that it is impossible at all, no. I want to point out that there are a lot of differences in competition among the industries and that steel is one of the worst in this respect, even though it is not a highly concentrated industry, not as competitive——

Representative BOLLING. What is your definition of "concentration"?

Mr. HOUTHAKKER. The number of firms making up a certain share of the output. The largest firm has less than 25 percent of the total output, and if you go to 4, you are still below one-half of the total, or maybe just slightly above. So it is not a highly concentrated industry.

Representative BOLLING. Could I interrupt you by telling you a joke? A long, long time ago the chairman of the Banking Committee in the House was called by a banker when there was legislation on the floor led by the cattlemen to break OPS—the Office of Price Stabilization—during the Korean war. The banker was a friend of the chairman and when the chairman asked why he was interested in the legislation the man's reply was, "Don't you know, we all work together?"

That is just a joke, but isn't concentration more complicated than market share?

Mr. HOUTHAKKER. I agree it is. The difficulty is that the antitrust lawyers look mostly at concentration. They have the idea, which I believe to be mistaken, that if you just try to decrease the concentration, then you will improve price behavior. That is not true.

I believe that you need a diversity of interests among the firms in the industry. As long as they regard themselves as colleagues, then you will get poor price behavior. This goes back a long time.

Judge Garry, who started United States Steel Corp., had the idea of "live and let live." In other words, we are all in this together, and we will not embarrass each other by bankruptcy. I believe that is the wrong approach.

Bankruptcy might actually help price behavior if the surviving firms see themselves as sufficiently strong to engage in active price competition. Not being a lawyer, I do not want to say what can be done. I have some ideas.

I would make refusal to sell an antitrust law offense because it would make it more difficult for firms to dominate their customers.

The copper industry is an example where the whole system is now breaking down, the system of producer pricing in which the firms go through a charade every few months. One raises the price, then the others say, "You have to meet the competition," and as a result the prices went up. "Meeting competition" means raising prices. United States Steel will say it must compete, which means that if Bethlehem's price goes up, United States Steel's price will go up, too.

This is a very difficult problem to deal with. Let me pursue this to see what wider implications it has.

Steel is just an extreme example in the state of manufacturing industry generally. It means when there is an increase in aggregate demand, then all firms raise their prices. If there is a decrease, they don't lower their prices. There has not been a decrease in steel list prices for 10 years.

When there is a decrease in demand, what they do is they reduce output, which means that in due course their employment goes down and as a result the aggregate unemployment figure would go up, and the Government says, "We have to do something. We have to stimulate the economy by fiscal and monetary policy." As a result, the steel price behavior is validated by the central Government.

This is one of the main reasons for the imperfect performance of our economy in this respect. There is this asymmetry. If we can break through that, we can achieve something.

I drew a parallel between steel and copper. The JEC or the Council on Wage and Price Stability can give thought to this lockstep behavior where they all follow the leader. We should look at something more like what is apparently emerging in copper, where just recently several firms, not including Kennecott, did raise producer prices. Kennecott stuck with its new pricing system, and as a result the firms that are still on the producer price system have had to retract some price increases in the last few months.

That is an example of what can be done even if an industry is fairly concentrated. The copper industry is more concentrated than steel.

I don't believe that what I am suggesting is impossible. It does re-

quire a rather detailed discussion of the steel industry, an analysis of what would be a suitable vehicle for better pricing decisions. For instance, some kind of futures market in steel would be a possibility.

There are a number of things that one can think of. Aluminum is also in the same category, although its behavior has not been as bad as in steel.

Representative BOLLING. Is this generally true of the primary industries?

Mr. HOUTHAKKER. It is true in industries that produce relatively homogeneous products.

Representative BOLLING. Gas?

Mr. HOUTHAKKER. Yes.

Representative BOLLING. Rubber?

Mr. HOUTHAKKER. Yes, to an extent. The only thing that can shake up the industry at the moment is foreign competition. I believe it is very important for the antitrust provisions to recognize that the steel industry is a worldwide industry.

You should look at the United States alone and then you get to decisions like the merger between Lykes and LTV, both of which are partly in steel. If you look at the steel industry worldwide, this merger is not anticompetitive. It will strengthen some firms and if only we can give them an incentive for independent price behavior, then we might end up with an industry that performs better than what we have seen so far.

In industries where there are many firms, the same price behavior is also sometimes found. In other words, concentration is not a decisive factor. I believe our antitrust laws are too much impressed with the correlation between structure, conduct, and performance. The idea has been for years that if only we can keep the structure as little concentrated as possible, then the performance will follow.

It just is not true. If you look around the United States, you will not find very much support for this particular notion. There are companies whose price performance is infinitely better than those of steel, even in manufacturing. Take, for instance, the lumber industry.

It is a primary industry. If you look at lumber, you find that the output fluctuates considerably, but not nearly as much as in steel. Prices fluctuate much more in steel because they go down when there is a decrease in demand. This is the kind of price behavior that should be encouraged.

How do you control this sort of antitrust activity? This is a very difficult problem.

It may be something that should be discussed with the steel industry, too. In the steel industry, when I conducted a steel study in 1971, there was a great sense of interdependence. The steel men, I met always talked about the interests of "the industry."

That does not strike me as a very legitimate object of concern. I would have been very appreciative if he said, "My firm will do better." I would have been impressed if he said, "It is better for the country." But all they said was, it was better for the industry. As long as that is the case——

Representative BOLLING. Would you comment on the competitiveness of the oil industry, oil production?

Mr. HOUTHAKKER. I believe the oil industry is fairly competitive.

I don't agree with the notion that the oil industry moves in lockstep. In fact, in the oil industry there is quite a different problem; namely, the problem that there has been too much Government intervention with a view to setting prices. This was especially true before 1972.

Until that time there were two things together that prevented price competition in the oil industry. One was the market demand prorationing by the Texas Railroad Commission. The other was the import quota system. These two things prevented the price mechanism from playing its appropriate role. Also, we ran down our oil resources. We followed the practice of "drain America first."

The oil industry, even though it contains a number of very large firms, is not anticompetitive. I would not compare oil with steel at all. When you talk with oil people, you don't get the same talk about the interests of the industry.

The oil people, in my opinion, are still quite independent in their decisions.

Representative BOLLING. There are people who would say that the Texas Railroad Commission was more the servant of the management of the oil industry of Texas.

Mr. HOUTHAKKER. What I am saying is that a State agency was being used for the maintenance of a cartel.

Representative BOLLING. There are people who would say the same thing about our export-import policy in that field.

Mr. HOUTHAKKER. Certainly the Government has always been responsive to this kind of pressure. There is only one qualification. Although it was a sponsor to the industry it was mostly responsive to small producers. They provided the political——

Representative BOLLING. The small ones, according to former Speaker Rayburn, became large.

Mr. HOUTHAKKER. Yes, and this is the kind of thing that Government should not do. When I was on the Council of Economic Advisers, I tried to stop the Interior Department from providing oil demand forecasts to the Texas Railroad Commission. These forecasts were a part of the prorationing process. It did stop for 1 month.

Representative BOLLING. That was a major accomplishment.

Mr. MEYER. I would like to comment. I think you raise a good point. In answer to the question are industries like steel likely to return to a textbook or 19th century model of competition, no, that is clear. Should we worry about that very much? No, I don't think so. But that leads you to the question, is there then anything the Government can do?

I think this was what Mr. Houthakker was addressing himself to and I think there are ways to improve competition in the industries drain on the consumer dollar. Mr. Houthakker has touched on some of them but others need a bit more elaboration. Imports in industries like steel and autos are the only competitive force a consumer has. We don't want to wipe those out. Even an industry like the auto industry, with three dominant companies, has to face foreign competition.

We have to look at the role labor plays in reducing competition. There is no better example than the steel industry where labor and management got together. They felt that nothing would be worse for either side than the influx of imports which they believe occurred when you have strikes. They signed a nagreement which outlawed those strikes. They have paid dearly for that.

Steelworkers have received tremendous increases in wages and fringe benefits. They have widened the wage gap between themselves and other industrial workers. They have jeopardized their jobs in the name of protecting themselves. We have to look at this shortsightedness, and not just at the board room decisions which they may have made.

I think the steel industry people are noto all crazy. The one new plant that has been built is quite efficient. In many cases, companies don't have the capital to invest in new plants, in part because they have given up so much at the bargaining table, and also because of costly environmental regulations.

As we look at the steel industry, the difference between it and the most competitive foreign industry is basically labor rates. There is no real difference otherwise.

Representative BOLLING. I think that you stated that fairly. John L. Lewis reduced substantially the number of miners in the process of going along with management on technological advances.

I guess West Virginia has recovered from that, and probably, in the long run, it will be considered historically to be a reasonable approach.

But I have yet to see—and I have been watching for 40 years carefully—it always ends up being relatively convenient to management's goal of high demand. I have been telling my labor friends for a very long time that they were going to work themselves out of business if they did not look out.

I have always said to management representatives that they may recognize that there was something wrong in the whole process, both on management's as well as labor's part.

I must admit that when I said this at a labor convention for the first time it shocked some people. It is very, very clear that the people who have been left out at the bargaining table are often people that both the management and labor unions have done well with.

Senator HATCH. I want to agree with the distinguished chairman. I think this is one of the most enlightening discussions, and provocative discussions, that I have been attending.

Representative BOLLING. This is what I said 20 years ago.

The thing that worries me is that we are not 1 inch closer to confronting this particular problem.

Mr. MEYER. I think you are right. We look at the nine basic industries that make up the major settlements: Communications, steel, autos, aluminum, coal, et cetera. Employment in those nine industries dropped by almost 1 percentage point from 1972 to 1975, while employment in the country as a whole went up about 10 percent.

My remarks are not meant as an attack on labor. As you yourself implied, they did not initiate the current round of inflation. But their efforts to keep abreast and in certain cases ahead of the current inflation can be self-defeating.

Representative BOLLING. That leads me to something Mr. Ackley said, concerning truculence. Part of the dilemma is, that for the first time, since Taft-Hartley, the labor movement actually thinks its survival is threatened.

Mr. MEYER. It is.

Representative BOLLING. We mentioned businessmen and their reactions.

The House Democratic Steering Committee, of which I am a member, had a meeting with the Business Roundtable. We had a very satisfactory conversation about not very much, including the revelation that they would help us on structural unemployment, although they were not yet prepared to deal with the macroproblem. But they were prepared to help the Government and society deal with the problem of structural unemployment, especially in the cities.

Finally, I listened to all of this, and a great deal of talk about inflation, and how the Government caused it all. I might add, there did not seem to be any notion among the panelists today that the Government has caused it all.

I said to them, and these are the presidents of Du Pont, General Motors, General Electric, and so forth, "You realize, don't you, that we will not solve inflation until you get together with the labor movement." There was the most ghastly silence that you ever heard. It was really dreadful. Even some of the politicians said to me later, what in the name of God did you mean with that awful statement?

I think it is very clear what I meant. There are no devils in this country. We have a situation that has gotten out of hand with inflation where for a very long time, people were doctrinaire. It was always the other fellow's fault.

If we are going to get any solutions, it will be a solution based on the kind of social coming together that resulted in the relatively good years after World War II. It is the working together of the elements of society, not their conflicts, that causes results.

Mr. HOUTHAKKER. I'm sorry, but I don't quite agree with that. The idea which you are espousing now is one that has been very influential in many European countries where they have a social contract system—the Germans, the Dutch, the British, and various other countries. It is based on the notion that competition does not exist any more; that there is no such thing as private enterprise in the strict sense. Everything affects the public interest, and many things can and should be done outside of the market.

I am not sure we are ready for this, and I don't think we want to move in this direction. Let us emphasize private enterprise rather than rely too much on negotiations.

But let me add one point: You say unions and big business should get together. What do they really account for? Unions account for 20 percent of the labor force. Big business is also losing some of its power because most of the recent growth is in areas where big business is not important.

Representative BOLLING. What about the impact on inflation?

Mr. HOUTHAKKER. I would say that inflation is a very widely dispersed phenomenon. You cannot single out big business alone.

Much of it has come from the health sector. That is not an industry where you can get unions and big business toegther.

Representative BOLLING. All the raw materials, all of the land——

Mr. HOUTHAKKER. All these things are involved, and I would say that just getting the unions aand big business together is not a satisfactory answer.

Representative BOLLING. I agree with that. But there is a very serious problem. My field was history. I was deprived of my Ph. D. by the war. The history of this country is very peculiar, but this country moves by stops and starts.

I do not know of a period in our history where we had a successful decade or two where there was not either, because of the dimensions of one group or another, not something very like a more complicated version of current associations, but still the kind of agreement that took place during World War II, and after World War II, among the major elements of the society.

It did not require any elimination of competition or conflict. It requires that ability to come up with acceptable approaches to problems.

What we are doing now is making it impossible to have acceptable approaches, because we are demanding that this be very pure.

It seems to me that is a very, very important element. It is the problem of how do you get started on dealing with inflation where all kinds of different groups are involved. Each one will take care of itself, and say, you first.

Mr. MEYER. I don't think we have to go to social contracts. We would have to rent RFK Stadium if we wanted all of the relevant players to sign them. That is neither feasible nor desirable. But we can still enlist cooperation, possibly through the right psychology. We don't have to have every one sign an agreement.

Representative BOLLING. I don't think a social contract could possibly work in this country, because this country is too complicated.

Mr. HOUTHAKKER. I agree with what Mr. Meyer just said about what price you have to pay to get the unions involved in this. Just the other day I was present at a meeting where a labor leader made a speech in which he primarily made two points.

First, he suggested a hard line foreign policy, and second, protection against imports. I'm not saying he was proposing a deal, but that is what it amounts to.

If you want to get the cooperation of labor unions, you have to follow protectionism.

This gentleman said that imports only serve to take jobs away from American workers. Government, I believe, will, or can accept that. So the alternative is to promote more competition, including in the labor market, where the labor unions have lost ground.

I am not against unions, but they have to fend for themselves to some extent. And there are other things that need to be done.

May I make one other remark concerning better competitive behavior? I believe that the tax proposal which I talked about, graduating the income tax, will go some distance in that direction, because it does introduce a diversity of incentives in an industry.

Suppose you have a large firm whose costs compare favorably with the rest of the industry. It doesn't want to rock the boat by different price behavior, so it will have a high rate of return. It does this essentially by not making use of its cost advantages. If you impose a higher tax on firms with a very high rate of return, then you would encourage them to expand, and this could be done only by increasing output.

That is why the tax proposal is an essential part of improving competition in this industry.

Mr. ACKLEY. I agree that we ought to seize every opportunity we can to try to make industrial markets more competitive. I think, as Professor Houthakker's description implies, that it isn't just competition, but attitudes and practices. I think those are even harder to change than the structure of markets.

It is the practice of basing prices on costs rather than on market demands. It is the wage setting based on considerations of equity and reasonableness and responsibility to the welfare of employees. It isn't just unions that keep wages from falling when there is unemployment. It is employers, too.

I think the solution requires consensus, but I don't think it requires agreement on a social contract. I certainly agree with both of my colleagues that a social contract for the United States is impossible, and probably undesirable.

It seems to me what it requires is the willingness of leadership in business and labor to be given a clear indication of a possible way to restrain inflation through their individual actions, so that they can take account of the public interest in reducing inflation.

You cannot get it done if only one firm or union tries to deescalate. All it does is hurt itself. But if all do it together, in some coherent way, no one gets hurt, and all are better off.

That is what an incomes policy tries to do—to create a situation in which, if we don't have inflation, we can avoid a competitive scramble that nobody wins.

If we do have inflation, it is much harder to find a way to deescalate that does not hurt anybody. That requires a public view, a governmental view of what is possible: A feasible set of individual targets that can move us in the direction that we want to go.

Representative BOLLING. With one comment, I will finish, and that is, I think it is worth looking at the history of the 80th Congress, because in that Congress, a Republican Congress with a Democratic President, in an atmosphere of prescience, adopted two policies which I think had a good deal to do with the 20 years that followed, one, the Employment Act, and one was the Marshall plan.

I think they are good illustrations of the kind of things I am talking about. The Marshall plan was not passed by the Congress. It was passed by the committee for the Marshall plan, which influenced Congress.

I am not suggesting that we need a social compact, but a very real understand, as the community did then, that we are in a great deal of trouble.

What they were afraid of then was depression. What I am afraid of is depression.

Senator HATCH. First of all, I would like to compliment all three of you. This has been one of the most provocative sessions I have attended on the Joint Economic Committee. I have been interested in your tax graduation concept, with regard to the rate of return.

But I am not sure what you mean by "rate of return." Can you just make it more clear to me? I think I understand it, but I want to know exactly.

Mr. ACKLEY. Do you mean equity, or rate of return on capital?

Mr. HOUTHAKKER. I really do mean equity, but I agree there is a

question whether total assets is a better measure. I have no final view on that.

But let me just explain it on the basis of equity.

Senator HATCH. Could I just interrupt you? It seems to me, what you are saying—and correct me if I am wrong—is that you would want to tax more stringently those companies that do not invest in capital and creation of jobs and gross national product, so if that company makes a tremendous rate of return, that would be the basis—what they do with that rate of return.

You would penalize them for not investing in the economy and expanding?

Mr. HOUTHAKKER. Not necessarily.

Let me start with one important thing I did not mention before. I would view this on an average basis over a number of years. In other words, a corporation that over a period of 5 years has had a rate of return to its equity of, say, more than 10 percent, just to choose an arbitrary figure, would be subject to a higher rate of corporate income tax than if the rate is less than 10 percent.

It would mean that a firm in this position would try to lower its tax rate by investing more, because by investing more, it would be in a lower tax bracket.

Senator HATCH. But in the future——

Mr. HOUTHAKKER. In other words, the incentive for the firm would be to increase its investments with a view toward getting into a lower tax bracket.

Senator HATCH. Would you also give incentives to, say, workers to produce more?

Mr. HOUTHAKKER. I don't think that workers have a great deal to do with productivity consciously, except in those few industries where the unions impose rules on it.

Senator HATCH. That is what I meant.

Mr. HOUTHAKKER. I would say that maybe Congress should change its labor laws so as to exclude certain subjects from collective bargaining. I don't think it is in the public interest that unions can bargain on the technology in the industry; and most unions don't do this. They make no attempt along these lines.

I think construction and a few other ones are the examples. It does not happen in the automobile or steel industry, or a number of other ones.

Senator HATCH. Excuse me, but I have one other question.

Under your proposal, what happens to the current tendency of capital to flow toward the high rate of return, expanding industries in which the demand seems high, and leaving industries where the demand is low?

If you level off the rate of return, you stifle the movement of capital, and the adjustment.

Mr. HOUTHAKKER. No; I don't think so. What will happen is that industries with high rates of return will have an added incentive for attracting capital, because if they don't invest, they put it all into cash, and then they will stay in a high tax bracket. So these firms will be under stronger pressure to expand their investment.

Therefore, it is those firms that are efficient that will be expanding most. In every industry, there are substantial differences among firms.

I would aggravate those differences with a view toward undoing the present, perceived harmony of objectives.

Senator HATCH. Mr. Meyer, you did make one comment, and I think you intended to explain it, and the next question was asked. And that is, the unions may feel threatened at this particular time.

What did you mean by that?

Mr. MEYER. I am not talking about something precipitous——

Senator HATCH. It came after the conversation that they may be pricing themselves out of jobs.

Mr. MEYER. There is a notion apparent in many trade unions that you can solve jobs problems by writing in a labor contract provision that makes it equally attractive for a company to hire you or not hire you. Such provisions as supplemental unemployment benefits or early retirement guarantee that you will get roughly the same income whether or not you work.

What I am suggesting is that that may be a very short-sighted approach. If a firm goes out of business 5 years from now because of labor costs or environmental costs; it will not be able to employ anyone.

I think unions should expend more effort trying to provide job security through work rule relaxation or moderate wage settlements. If they help to maintain the viability of their industries vis-a-vis foreign competition, they will have a job 5 or 10 years from now.

Senator HATCH. So you are commenting on the situation rather than on the present law regarding that?

Mr. MEYER. I don't see the current set of labor laws we have as a major impediment to their survival. It may be in certain cases, but I agree with Professor Ackley's comment on that. I think most of the problems are found in the collective bargaining arena.

You see that in construction now where they have high unemployment. Union after union is trading work rules, giving them up, in order to get people off the bench. They are giving up ground through collective bargaining, reducing the overtime premiums and manning requirements.

The reason commented to you as I did on the rail situation was that it was in part our discouragement of not seeing those antiquated work rules seriously addressed that caused us to speak out, even though it angered a lot of people.

Representative BOLLING. Thank you.

I think, considering the hour, I will call the end to our discussion. We are very grateful to all of you for a very interesting morning.

We will meet next Tuesday, June 20.

[Whereupon, at 12:30 p.m., the committee recessed, to reconvene at 10 a.m., Tuesday, June 20, 1978.]

SPECIAL STUDY ON ECONOMIC CHANGE

TUESDAY, JUNE 20, 1978

MANAGING MONEY

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 345, Cannon House Office Building, Hon. Richard Bolling (chairman of the committee) presiding.

Present: Representative Bolling and Senator Bentsen.

Committee staff present: Louis C. Krauthoff II, assistant director; Lloyd C. Atkinson and Thomas F. Dernburg, professional staff members; Mark Borchelt, administrative assistant; and Stephen J. Entin, M. Catherine Miller, and Mark R. Policinski, minority professional staff members.

Special Study on Economic Change staff present: Charles S. Sheldon II, resarch director; Robert Ash Wallace, research director; George D. Krumbhaar, Jr., counsel; Richard D. Bartel, staff economist; Paula J. Dobriansky, research assistant; and A. A. "Chip" Sayers, research assistant.

Also present: John B. Henderson and Everett M. Kassalow, Congressional Research Service, Library of Congress.

Representative BOLLING. The committee will be in order.

I will go through the proceeding I have done in each of the panel discussions. I guess this is the 11th.

I made an opening statement, which was lengthy enough so that I did not feel that I needed to make another one. Since I do recite a little admonition, which we then honor in the breach, if the panelists so desire, the admonition is that they summarize their thoughts in approximately 10 minutes, if they will, so we can turn this into a conversation instead of just the normal hearings.

The attempt has been successful in a number of cases. It turned out to be intellectually interesting.

So we seek relative brevity, and then interchange from then on.

Our first witness is Leif Olsen, senior vice president and chief economist of Citibank of New York.

He joined a substantial number of witnesses who have just come back from Europe. He is a graduate of the University of Oklahoma. His career has included financial writing for the Wall Street Journal and the New York Times, and service as chief of the public information division of the Federal Reserve Bank of New York.

He has been with Citibank since 1962.

Proceed as you wish, Mr. Olsen.

34-880—78——6

STATEMENT OF LEIF H. OLSEN, SENIOR VICE PRESIDENT AND CHIEF ECONOMIST, CITIBANK, NEW YORK, N.Y.

Mr. OLSEN. Thank you, Mr. Chariman.

In keeping to the spirit of this meeting, which I understand is something in the form of a seminar, I will make some brief introductory remarks to essentially set forth at least a theoretical concept with regard to the relationship between monetary policy and economic growth and inflation.

I will set that forth simply for the purposes of providing a background against which we may continue our discussion.

The relationship between changes in the money supply and, in this case I am using what is generally referred as M2, which is current policy, and nominal GNP has been remarkably consistent over the past 15 years or so, sufficiently consistent to, in fact, engender a high degree of confidence that a continued relationship between the two will persist.

For example, in the period from 1960 to 1970, M2 increased by 6.7 percent annual average, and from 1970 to 1977, increased by 9.7 percent.

When we look at the change in nominal GNP, we find that it is an average rate of change annually from 1960 to 1970, which was 6.9 percent, and between 1970 and 1977, it was 9.8 percent.

When we break down the rate of increase in nominal GNP between the two periods, we find approximately a 3-percent increase in GNP, while the real GNP, rate of increase, was essentially the same in both periods.

This relatively steady relationship between nominal national income and M2 thus leads to the conclusion that a prerequisite for persistent inflation is for monetary policy to sufficiently accommodate increases in the price sector, and also leads, of course, to a conclusion that if the Federal Reserve gradually reduces the rate of M2, that it would gradually unwind the rate of inflation in the economy.

That, I will say at this point, is a highly simplified and very brief interpretation of the relationship. It is much more complex than that, as I am sure will be brought out in the discussion, because there are many forces at work in the economy that make it difficult for the Federal Reserve to slow down the rate of growth of the money stock.

The rate of increase in nominal GNP leads to inflation implications. The ability of the economy to grow at its potential growth rate is approximately 3½ percent currently. If monetary policy is causing M2 to grow at a rate which seeks to achieve a 10- to 11-percent increase in the nominal national income, then when the economy has reached potential GNP, the difference between potential real growth, of 3½ percent, and the actual increase in the nominal national income of 10 to 11 percent will be represented by an increase in the price of inflation.

Reducing the rate of growth of the money supply in order to slow down the rate of inflation does incur risks. In the past, monetary policy has unfortunately been highly volatile. It has been overly expansive, leading to an increase in inflation, as the economy reaches its potential growth. Then monetary policy reduces the rate of growth of money suffifficiently so as to induce a recession by slowing down

the rate of growth of nominal national income to something at or below the rate of inflation. Because inflation does not respond very quickly to slowdowns in money growth, real output is squeezed instead.

Monetary policy thus produces a recession. This has been, unfortunately, the experience we have had in the past period since the end of World War II.

Thus, at this point, with several years of relatively rapid money growth the economy, at least in the estimate of some economists, is approaching potential output. The threat of further acceleration of inflation is great.

The problems involved in managing monetary and fiscal policies at this point are considerably more dicult than those we faced in the first 3 years of recovery. Reducing the rate of growth of money now would have to be conducted with great caution, because, if monetary policy becomes overly restrictive, there is a high possibility that a recission would occur.

It would be highly desirable if monetary policy eased back on the growth rate of money cautiously and carefully over an extended period of time. This, too, is difficult, because that takes time and hence takes considerable amounts of patience.

It would be possible, if we are to pursue such a cautious policy, to maneuver through this period without experiencing a recission.

Thank you.

Representative BOLLING. Thank you very much.

Next, we have Professor Hyman Minsky, professor of economics, Washington University, St. Louis, Mo., my home State.

He received his undergraduate degree from the University of Chicago and his doctorate in economics from Harvard University. He taught at Brown University and the University of California before joining the faculty of Washington University in 1965.

He spent his academic year, 1969 to 1970, as a visiting scholar at St. Johns College in Cambridge, England. One result of that period of study was the publication of a book in the Columbia University series of essays on the great economist, John Maynard Keynes.

Mr. Minsky has also been an academic consultant to the Federal Reserve Board of Governors and the Federal Deposit Insurance Corp.

STATEMENT OF HYMAN P. MINSKY, PROFESSOR OF ECONOMICS, WASHINGTON UNIVERSITY, ST. LOUIS, MO.

Mr. MINSKY. Thank you very much. I apparently am a sinner, I came with a prepared statement.

Representative BOLLING. You certainly are not a sinner.

Mr. MINSKY. I wanted to address quite exclusively the query that you sent in your letter. It was, and I am quoting, "How the efficacy of traditional monetary policy has been effective in dealing with persistant inflation and whether financial instability could be reversed only by policies that result in worsening inflation."

The committee's query leads to two questions: "What causes instability and inflation in our economy?" and, "Can managing money by the traditional tools control or eliminate instability and inflation?"

I will discuss financial instability, how our current inflation is linked

to the way we "fight" instability, and the managing of money and the institutions whose liabilities are money.

The United States from its founding through the great depression of 1929–33 suffered from periodic financial crises which were associated with debt deflations and deep depressions. Since World War II no fully realized financial crisis has occurred and we have not had a deep depression.

Following bursts of inflation immediately after World War II and when the Korean war started, there were 14 years of relative tranquillity. During 1952–66, unemployment and inflation were low by today's standard and there was no threat of a financial crisis.

Beginning in 1966 there have been three serious threats of a financial crisis; the credit crunch of 1966, the Penn-Central/commercial paper crisis of 1970, and the Franklin National Bank failure/REIT crisis of 1974–75. In each case lender of last resort intervention by the Federal Reserve and other banking authorities aborted a debt deflation process, and the demand and financial repercussions of big government assured that a deep depression did not happen.

It has become evident in the years since 1966 that the processes that make our type of economy cyclical are still at work but that with big government the result of these processes is different than with the small government we had before World War II.

The chronic inflation and recurrent financial crises since 1966 are linked. What banking authorities do to prevent a financial crisis from becoming a debt deflation and what the Government does to stop the threat of a depression lead to a subsequent inflation. Roots of today's inflation lie in Federal Reserve and Government actions in 1974–75.

Our economy is characterized by the use of debt to finance investment and positions in capital-assets. Both the data and theory show that over a run of good tranquil years—such as 1952–66—financial relations evolve, so that an initially robust financial system, in which a financial crisis is unlikely to happen, becomes fragile and crisis-prone. This is so because over a run of good, claim years the risk premium that businessmen, bankers, and investors attach to the use of debt to finance activity decreases. As a result of cumulative changes in the volume and composition of debt the proportion of business, household and bankers' cash flows that is committed to servicing debts increases, and an increasing proportion of outstanding debt can be "paid" only if new debts are floated.

During good times the financial structure becomes more complex. New instruments—such as Federal funds, commercial paper and certificates of deposits—new usages—such as "liability management" banking—and new institutions—such as money market funds and real estate investment trusts—appear and spread in response to profit opportunities. Established financial institutions such as commercial banks take on new functions, issue new types of liabilities, and finance activity through exotic assets. Bankers respond to the strong demand for their services by raising the ratio of their assets to equity. Because of the evolution of financial practices the supply of finance is responsive to the demand for finance. Because the Federal Reserve does not control financial evolution, the Federal Reserve cannot control the volume of activity that is financed.

An investment boom is the normal result of our type of economy doing well over an extended period of time; the fundamental instability is "upward" from doing well to a boom, because doing well leads to higher capital-asset prices as profits rise and seemingly become assured. In addition, doing well increases the financing available for holding capital assets and producing investment. However, as an investment boom proceeds, the demand for finance outruns the increased supply available from institutional evolution and portfolio adjustments. This puts upward pressure on both short- and long-term interest rates. Higher short-term interest rates increase the cost of investment even as higher long-term interest rates depress the value of capital assets. This scissors effect decreases the pace of investment.

Liabilities are commitments to pay cash at dates or under conditions described in the contract. The needed cash can be obtained: One, from "operations," two, by rolling over—borrowing to pay—the principal even as interest payments are covered by income, or three, by borrowing to pay both principal and interest on outstanding debt.

When receipts fully cover payment commitments, the unit is, in my terminology, hedge financing; when borrowing is necessary to meet repayment of principal, the unit is speculative financing; and when a unit need borrow to pay interest, the unit is Ponzi financing.

Both theory and data show that over the course of good times the ratios of speculative to hedge financing and of "Ponzi" to speculative financing increase. Nonfraudulent Ponzi finance takes place whenever long gestation investment projects are undertaken. But rising interest rates raise the costs of such schemes and lower the present value of the distant in time payoff. High and sharply rising interest rates can transform hedge into speculative and speculative into Ponzi financing. As financial postures shift toward speculative and Ponzi finance—toward the use of short-term debt to finance long-term endeavors—the susceptibility of the economy to a crisis and the ability of within-the-system processes to trigger a crisis increases. Financial crises are normal results of the workings of our economy.

In a capitalist economy, if Government is small, profits equal investment. Profits are the funds that validate business debts. Higher interest rates tend to cut investment, thus lowering profits. This lowers the ability of business to fulfill commitments on debts: The liabilities of what were hedge and speculative units become "workout" or Ponzi assets on the books of banks. This leads to further declines in investment and profits. In our economy debt structures that can be validated only if investment and profits increase are built even as financial market processes that decrease investment and profits are set in motion.

Firms and financial institutions that need to sell liabilities, even as their profits decrease, are the mechanism that triggers "runs" on banks, financial institutions, financial markets, and firms. Such runs occurred throughout our history and again in 1966, 1969, 1970, and 1974–75.

Our economy is not a self-equilibrating system. Its essential path is cyclical. Some of the cycle downturns have big-bang properties that are associated with financial crises. The above propositions differ from those of the standard economic theory—the theory of both monetarists and Keynesians—which holds that our economy is self-equilibrating and its basic path is steady growth. Because standard economic theory

cannot explain financial crisis it is a poor guide to economic policy for our economy.

If our economy is now crisis-prone, why haven't we had a full-blown financial crisis and deep depression since World War II? In particular, why didn't the sky fall in 1975?

The sky did not fall in 1975 because the Federal Reserve, the Federal Deposit Insurance Corporation, and other regulatory bodies acted as a lender-of-last-resort and: One, poured about $1.7 billion into refinancing the Franklin National Bank; two, validated all deposits in failed banks, not just the $40,000 statutory limit; and three, facilitated the refinancing of REIT's by commercial banks.

Furthermore, the Federal Reserve, as it validated Franklin National's overseas liabilities, implicitly extended its protection to all deposits in overseas branches of U.S. banks. That is one of the most inflationary things it did.

The sky did not fall in 1975 because the Federal Government threw a massive deficit at the economy: In the second quarter of 1975 the deficit ran at an annual rate in excess of $100 billion. Whereas in a small Government economy profits equal investments, in a big Government economy, profits equal investment plus the Government deficit. In the second quarter of 1975, even as unemployment rates were rising rapidly, corporate profits increased. Because of the huge Government deficit, the ability of business to fulfill its financial commitments was not compromised as investment fell.

The seeds of our current inflation were sown in the turbulent days of 1974–75. The huge expansion of overseas deposits of U.S. banks was facilitated by the implicit guarantee from the Federal Reserve that emerged from the way Franklin National was liquidated. The vast expansion of global dollars is one cause of the depreciation of the dollar on the foreign exchanges, and this is one cause of our inflation. The huge Government deficit of 1975 has been followed by smaller, but still substantial, deficits. Big Government was a "blessing" when the thrust toward a financial crisis was aborted; it is a curse when inflation takes place during relatively good tires.

The managing of money in an inherently unstable economy is not easy: It cannot be set out in simple rules. Banks and other profit-seeking financial institutions have developed many ingenious instruments which enable them to finance activity without issuing demand deposits and passbook savings accounts. Even as attention has focused on the money supply, the banking system has evolved so that the bank liabilities that enter into the money supply are of lessened significance. Monetary policies which emphasize control of banks' reserve by open market operations may have had some power to control the tranquil economy of 1952–66, but they have little power in the highly convoluted and fragile system of today, especially as the threat of a financial crisis leads to prompt lender-of-last-resort intervention by the Federal Reserve. Techniques and rules for managing money that had some validity prior to 1966 will not do in the financially fragile and cyclically turbulent economy we now have.

To do better we should develop means of controlling debts. On the one side this means reform of a myriad of laws and regulations which encourage debt financing. To decrease the emphasis on debts, full

employment rather than economic growth should become the proximate objective of policy; what is done to encourage economic growth is inflationary and tends to increase financial instability.

The rise in bank credit that was made possible by a rise in the asset-equity ratio of the giant banks has been a destabilizing influence over the past decade. Bank examination is effective in controlling this ratio for small- and modest-size banks but bank examination is ineffective in controlling giant banks. To establish some Federal Reserve control over destabilizing credit expansion by giant banks, the Federal Reserve and the FDIC should have the authority to set ceilings on the asset-equity ratios of banks.

Because of time limitations this has been a very truncated statement of the financial instability hypothesis and its implications for inflation and the management of money. I am attaching two short pieces I published recently that may be of use to the committee.

To return to the two questions I phrased at the beginning, financial instability is inherent in our type of economy, the inflation we have had in the past decade is largely the result of how we have gone about preventing debt deflation and deep depression, and the lessons learned about managing money in the tranquil years, 1952–66, are of little or no use in controlling the instability and inflation of the late 1970's.

[The attachments to Mr. Minsky's statement follow:]

[From Society, March–April 1977]

HOW "STANDARD" IS STANDARD ECONOMICS?

(By Hyman P. Minsky[1])

The poor performance of economic forecasts and policy since the mid-1960's means that economics as a discipline has a great deal to be modest about. In particular, the credentials of the economists who have been giving policy advice must be questioned.

In 1976 Alan Greenspan, chairman of the Council of Economic Advisors with Presidents Nixon and Ford, guaranteed that unemployment would be at or below 7 percent and falling by year end. The various commercial econometric forecasts—Klein's "Wharton Econometrics," Eckstein's "Data Resources," and Evans's "Chase Econometrics"—were all at least as wrong as Greenspan. They essentially agreed that a 6 percent expansion rate and a 6 percent price rise was in the offing during 1976. Not only did the actual expanion rate in 1976 fall below the forecast rate, but at year end 1976 unemployment was 8 percent.

CRISIS IN ECONOMIC THEORY

Greenspan, Klein, Eckstein, and Evans are reputable professional economists and very bright people. They are supported in their activities by a galaxy of well-trained economists and statisticians. Their forecasts and policy advice are always buttressed by a parade of computer printouts. They impress patrons with their mathematical formulas, wealth of numbers, and academic credentials. Nevertheless, despite their reputations and prestigious positions, their most striking common attribute is tha they were wrong in 1976.

Furthermore, this is not the first time they and other establishment economists have been wrong; the years since the mid-1960's are littered with the errors of establishment economists. As a result of the failure of establishment economics, policy decisions have been inept. Wrong and inept policy has led to a marked deterioration in the performance of the economy.

Unfortunately it is the unemployed, the poor, and the near poor—the hourly factory hands—who pay a high price for these failures. Even as they are wrong

[1] Hyman P. Minsky is professor of economics at Washington University. He is the author of a book on John Maynard Keynes and is a past contributor to and associate editor of *Society*. Formerly he served as a consultant to the Board of Governors of the Federal Reserve System.

time and again, these establishment-advising economists become ever more affluential. It is a wry characteristic of our times that as the established forecasting services fall on their faces, their billings continue to rise—and their influence in the corridors of power continues to increase.

In a serious discipline, whenever experimental evidence disagrees with the predictions of a theory, the theory is either discarded or modified. Each economic forecast and each economic policy decision is like an experiment in science which tests a theory. The failure of forecasts and the failure of the economy to react as predicted to policy actions are evidence that the theory underlying the forecasting models and the policy advice do not capture essential characteristics of our economy. There is a crisis in economic theory, for the standard theory that the advisors use seems to be less relevant for our economy with each passing year. The problem of economics is to develop and apply a theory that is relevant for the world in which we live.

Economic theory is a construct of man that is created to explain phenomena in the world. Economic theory—like all scientific disciplines—grows and develops under two types of stimuli, the internal logic of the ruling theory and external worldly pressures. A discipline is in a crisis whenever the inherited body of theory will not do. Economics is now in a crisis and the main task of the discipline is to develop new theory to replace the inherited theory.

NEOCLASSICAL SYSTEM

Much is made in the press and in the discipline about the distinction between monetarists and Keynesians; between the economics and the economic policy advice of Nobel Laureates Milton Friedman and Paul Samuelson; between a chairman of the Council of Economic Advisors like Alan Greenspan and one like Walter Heller. In truth there is no significant difference in the economic theory used by these economists. Monetarists and Keynesians use the same economic theory.

Today's standard economic theory—the theory that underlies the models of both the monetarists and the Keynesians—is usually called the "neoclassical synthesis." This economic theory is largely a creature of the years since World War II. The neoclassical synthesis was born after the appearance of Keynes's classic work on employment, interest, and money, and integrates some aspects of Keynes's thought with the older classical analysis that Keynes believed he was replacing. It is the neoclassical synthesis that has failed.

Keynes's study is a complex work that explores many facets of a capitalist economy. The essential aspect of Keynes's theory is a deep analysis of how financial forces—which we can characterize as Wall Street—interact with production and consumption forces to determine output, employment, and prices. One, but not the most important, result of Keynes's theory is the demonstration that under capitalist institutional arrangements the economy at times will be characterized by persistent unemployment. The neoclassical synthesis seizes upon this result of Keynes's theory. However, the most important result of Keynes's theory is ignored in the neoclassical theory. This most important result is that a capital-using capitalist economy with sophisticated financial practices (i.e., the type of economy we live in) is inherently unstable. It is this second result, and the analysis of the economy by Keynes that led to this result, that provides us the foundation for an alternative to the neoclassical synthesis.

The neoclassical synthesis is derived by integrating the bare bones model derived from Keynes that explains the way in which an economy may generate persistent unemployment with the labor and commodity market model that was developed in the classical economics. The neoclassical synthesis shows that (1) fiscal and monetary policy measures can eliminate persistent unemployment and (2) there are self-correcting forces within decentralized markets that would in time lead to the absorption of unemployment. Thus the neoclassical synthesis speaks with a forked tongue. On the one hand, it holds that activist, interventionist policy can eliminate persistent unemployment or chrome inflation; and on the other, it holds that if nothing is done the economy will in time and of its own workings settle in a stable price, full-employment regime. The same theory can rationalize the noninterventionist views of Alan Greenspan and the interventionist views of Walter Heller.

It is evident that this neoclassical synthesis will not do for our economy in our time. It is designed to deal with equilibrium and equilibrating tendencies, whereas our economy has been increasingly unstable. Three progressively more serious

financial trauma, recessions, and critically disruptive movements in interest rates and asset prices have taken place since 1966. Such unstable behavior is foreign to the neoclassical synthesis. Standard economists can offer no satisfactory explanation of what happened in the past decade. The least we can require of economic theory is an explanation of why a financial debacle almost occurred in 1974–75.

In order to do better, economists must abandon standard theory and develop an alternative line of thought that pays attention to the institutional detail and disequilibrating relations of our economy. Such an alternative is emerging in what is now called "post-Keynesian" theory. The particular version of post-Keynesian theory that will be taken up here emphasizes the financial relations of a capitalist economy. This post-Keynesian theory shows that strong endigenous destabilizing processes exist in an economy that is capitalist, uses capital-intensive production techniques, and is financially sophisticated. Our type of economy is inherently unstable.

INSTITUTIONAL CHARACTERISTICS OF CAPITALISM

Adam Smith, the founder of economic theory, posed two questions. How come a decentralized market economy does not result in chaos, i.e., is coherent? How come one country is richer or poorer than another? The neoclassical synthesis has grown out of the attempt to answer the first question. Marxist economics and the economic theory derived from Keynes that is relevant for our times are mainly concerned with Smith's second question.

Standard economic theory has shown that a decentralized market mechanism will yield a coherent result with respects to the details of production, consumption, and income distribution under a wide variety of market structures (oligopoly, monopoly, and competitive markets) and a wide variety of institutions (trade unions, corporations, public ownership). The robustness of the coherence of decentralized markets means that the outcomes may be inefficient and inequitable. A coherent economy need not be a just economy.

Although the standard economic theory of Keyne's day could explain why decentralized markets yield a coherent result—albeit not as elegantly as today's mathematized economic theory—it could not explain the peristence of unemployment and it especially could not explain the incoherence financial markets and the economy in general exhibited in 1929–33. Keyne's great work was an attempt to construct an economic theory which can explain why a decentralized market economy is usually coherent but from time to time becomes incoherent. The key to incoherence—the essential flaw in capitalism which makes laissez faire capitalism a system that cannot work—centers in the investment process in a capitalist environment and the way in which both investment activity and ownership of the stock of capital assets are financed. The flaw in capitalism is due to the essential attribute of capitalism: private ownership of the means of production; trading in capital assets and financial assets; and a complex, sophisticated financial system.

A capitalist economy has two institutional characteristics that are critical to the occasional development of incoherence. One is that there are two sets of prices and two sets of transactions. One set of prices and transactions deals with the production and distribution of current output. This set of prices is the only set of prices considered in the classical economics and the neoclassical synthesis. The other set of prices and transactions deals with capital assets and financial instruments.

For the economy to function normally the two sets of prices must be properly aligned because investment, a part of current output, becomes a capital asset once it is produced and at work. Investment goods will not be produced and financed unless it is expected that the price of the finished product as a capital asset will exceed, by a large enough margin of safety to placate the fears of the unknown future, the cost of the investment good. If the prices of capital assets and financial instruments are high relative to current output, then an investment boom and inflation are likely to result; if capital asset and financial instrument prices are low relative to current output prices, then investment will be sluggish. A recession is likely to occur.

Another institutional characteristic of the economy we are concerned with is that there is a system of borrowing and lending based upon margins of safety. The essential borrowing and lending in a capitalist economy finances investment and positions in the stock of capital assets. Furthermore, the money supply of a capi-

talist economy emerges out of the borrowing and lending that takes place. Borrowing and lending are always money today-money tomorrow exchanges; because of the nature of time and history, the future is always uncertain. Thus the extent and the nature of the margins of safety required by both the borrower and the lender, as they enter into deals, will depend upon the views of the future.

Over a run of good times the view as to the required margins of safety needed for various debts decreases. Furthermore, the practice of borowing with the expectation that the debt will be repaid by issuing new debt increases. In addition, idle cash is activated as good times are sustained. The essential instability of capitalism centers around the way in which financial margins of safety are eroded during periods of good times. As the margins of safety are eroded, the price of capital assets rises relatively to the price of current output. The economy will generate an inflationary boom out of its internal operations. However, because some of the financing of this boom comes from activating the cash that is held as a margin of safety, an inflationary boom will be accompanied by a rise in interest rates.

This argument is an expansion and extension of ideas and concepts that are in Keyne's work but which are largely neglected in the development of today's standard economics. Financial instability as the result of the internal workings of the economy is foreign to the economics of the neoclassical synthesis. Whether an economist be labeled Keynesian or monetarist, liberal or conservative, Republican or Democrat, as long as his economic theory is the standard theory of today he has no way of explaining the credit crunch of 1966, the commercial paper crisis of 1970, and the multidimensional financial trauma of 1974–75.

The neoclassical synthesis is thus a theory that does well enough in explaining the behavior of our economy in an age of financial tranquility such as ruled in the period immediately after World War II. But it cannot provide a relevant framework for our type of economy in the past decade.

RECENT ECONOMIC INCOHERENCE

In the autumn of 1966 a near miss with respect to a financial crisis took place. This so-called credit crunch was the first event of its kind since the era of the Great Depression. In 1970, in the aftermath of the failure of the Penn Central Railroad, another near financial crisis occurred. In 1974–75 there was a spate of bank failures—including the failure of the $5 billion Franklin National Bank—and a virtual bankruptcy of the entire real estate investment trust industry (REIT). These three financial crises were resolved by means of extraordinary actions by the Federal Reserve System; these extraordinary actions were the lender-of-last-resort intervention by the Federal Reserve.

A financial crisis takes place when a run occurs on a set of financial institutions or markets. These financial institutions and markets have short-term debts outstanding, and they use this short-term debt to finance positions in longer-term assets. The short-term financing of holdings of long-term assets is the essence of speculative finance. Both the unit engaging in speculative finance and its lender expect new debt to be issued to repay maturing debt; debt is expected to be "rolled over." The continued viability of a unit engaged in speculative finance depends upon the normal functioning of those financial markts in which its debt will be rolled over. The normal functioning of a financial market can be disrupted by any event which makes the suppliers of funds to these markets suspect that the funds they place in this market or instrument may either be lost through default or that payment may be stretched out. Periodic runs on banks and financial markets are normal results of financial practices in a capital-using economy.

The credit crunch of 1966 was the first financial difficulty since the 1930s that involved a run on a financial instrument or set of institutions and which required special Federal Reserve action. The credit crunch of 1966 was a normal outgrowth of the uninterrupted expansion of the economy since early 1961 in the context of a longer postwar period in which there was no significant recession. Under capitalism a protracted period of good times leads first to a boom and then to a crisis.

The second postwar financial disturbance that required Federal Reserve lender-of-last-resort intervention occurred in 1970. This time the market in distress was the commercial paper market, and the Federal Reserve's intervention took the form of allowing banks to acquire funds from the Federal Reserve so that a run on commercial paper could be refinanced.

The most serious financial crisis, the highest unemployment, and the deepest recession since World War II took place in 1974–75. This situation followed

fast upon the highest interest rates in modern times. Only decisive lender-of-last-resort actions by the Federal Reserve and cooperating commercial banks, together with the income- and financial-stabilizing effects of big government, prevented the bad of 1975 and 1976 from being worse. The steps taken to avert the worst that could have happened planted "time bombs" in the economy that have been going off since 1976, and which threaten an even worse financial crisis in the near future.

1974–75 FINANCIAL TRAUMAS

The 1966 and 1970 episodes followed a fight against inflation by the Federal Reserve, a fight that took the form of imposing monetary constraint. Following the 1966 episode a pause in the economic expansion took place; after 1970 a recession occurred. Inflation was at a higher rate after 1966 than before. After 1970 the United States experienced double-digit inflation.

In the world inhabited by establishment economists and the Federal Reserve, nothing succeeds like failure. The failure of monetary constraint to achieve more than transitory success in halting inflation in 1966 and 1970 and the success of monetary constraint in triggering financial traumas that threatened a deep depression in these years meant that monetary constraint was sure to be the principal weapon of an antiinflationary policy in 1973–74.

The critical element in the multifaceted financial crisis of 1974–75 was the failure in October 1974 to Franklin National Bank. At the end of 1973 Franklin National, with $5 billion in total assets, was the twentieth largest bank in the United States. It was by far the largest U.S. bank that has ever failed, and its failure may be a sign of what awaits us.

The failure of Franklin National was triggered by a run on its London branch and Wall Street operations after losses in its foreign exchange operations were disclosed. When Franklin National was finally closed, some $1.7 of its $3.6 billion in assets were supported by Federal Reserve loans. As a result of this massive infusion of funds by the Federal Reserve, all the deposit liabilities of Franklin National Bank, including certificates of deposit at the overseas.branch, were validated. By its action in 1974 the Federal Reserve extended the protection of the Federal Reserve system to deposits at overseas branches of U.S. banks. By furnishing Franklin National with funds to pay off its overseas depositors, the Federal Reserve was in effect making every dollar of deposits at an overseas branch of a U.S. chartered bank the equivalent of a deposit in a U.S. bank. Thus in 1974 the Federal Reserve abdicated its responsibility for controlling the growth of the U.S. money supply.

The Franklin National failure was not the only dimension of the financial crisis of 1974. An entire financial industry, the real estate investment trusts, lost is ability to sell its commercial paper in the market. The run on the REIT commercial paper was offset by a huge infusion of bank credit in order to prevent wholesale bankruptcy. The earnings and net worth of many giant and large commercial banks were impaired by this refinancing operation. In addition to failures of Franklin National and other large banks and the run on the REITs, 1974–75 also saw the near bankruptcy of New York City, a number of utility companies, and some major airlines. "Debt restructuring" and walking bankruptcies characterized these years.

LESSONS FROM THE RUNS

These three serious runs occurred on financial markets or banks. The 1966 run occurred on bank certificates of deposit; the 1970 run occurred on the commercial paper market; and the 1974–75 run occurred on two fronts, the commercial paper of REITs and the money market deposits of Franklin National. Each time a run occurred an instrument or an institution that had grown rapidly during the preceding boom was the focal point of the disturbance; each time a run occurred the Federal Reserve intervened to facilitate the refinancing of the threatend position.

Thus by its protection the Federal Reserve legitimized the new instrument or the new institution. In 1966 and 1970 minor institutional and usage reforms were ventured after the near crisis. No serious effort at reform of the overseas operations of U.S. banks occurred after the 1974 Franklin National fiasco.

The growth and history of certificates of deposits, commercial paper and the accompanying covert bank liabilities, and the liabilities of overseas branches of U.S. banks show that the elaborate mechanisms of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the comptroller of the cur-

rency are not capable of controlling the disruptive and destabilizing behavior of the giant banks. Because present policymakers wear blinders due to their acceptance of neoclassical theory, which does not allow for financial instability, they cannot visualize the reform of banking and finance that is needed if a more stable, more nearly fully employed, and less inflationary economy is to be achieved.

PROPOSALS FOR REFORM

Giant banks and multibillion dollar financial markets outside of banks must be brought under control. As things now stand the Federal Reserve and the other authorities are periodically confronted with a decision: do they validate and protect the positions of the giant banks, or do they allow a giant, worldwide depression to occur? When faced with these alternatives, the choice of the banking authorities and the political leadership is preordained: they will do all they can to bail out the financial markets and institutions that are threatened. The process of the bailout assures that another inflationary round followed by another crisis will occur unless, in the interval after the bailout, serious reforms of the financial structure are undertaken.

Because the standard economic theory of our day cannot explain financial crises, to the economist-advisor they do not exist. The inflation/threat of crisis oscillations are explained by errors in the manipulation of the money supply and in fiscal variables. The transition period to the Carter administration was evidence of the superficial nature of the current political discourse. The questions that were debated related to the size and presumed beneficiaries of a tax cut and whether the money supply, whatever that may be, should grow at one rate or another. No question was asked about why our economy has become a chronic labor surplus economy and why our economy is so given to fluctuations.

Post-Keynesian theory of the kind that is emerging as an alternative to the neoclassical synthesis leads to two propositions that should guide reform and reconstruction of our economy. The first is that decentralized markets lead to a coherent result; the second is that the financial institutions of capitalism are fundamentally destabilizing. The first proposition implies that detailed planning is not necessary and that the market mechanism, because it leads to a coherent but in no sense a best result, can and should be used as an instrument for achieving social objectives. The second proposition implies that if strongly disruptive business cycles are to be avoided, the banking and financial system must be constrained and controlled as well as protected by the Federal Reserve.

Currently the Federal Reserve System has no effective control and has no means of constraining the giant money market banks. There are some nine banks in the United States—six in New York City, two in Chicago, and one in California—which operate large-scale overseas branch systems, which have total assets in excess of $20 billion each, and which have huge trust and other specialized money management operations. These giant banks also have a very thin owners equity/total assets ratio.

To construct a financial system that is more conducive to stability, it is necessary to bring these giant banks under control. The only way this control can be achieved is by reducing their size to manageable proportions. The rule of thumb is that no bank or financial institution can be so big that the Federal Reserve would not allow the institution to fail. Thus no institution can be so big that its failure is likely to trigger a debt deflation process which leads to a big depression.

To bring the giant banks under control, it is necessary to separate the three functions—domestic banking, overseas banking, and trust activities—into separate organizations. When this move is attempted the glaring weaknesses of the capital position of the giant banks will be revealed. In addition, the giant banks should be broken into manageable pieces. The first step in doing this is to separate the domestic banking, overseas banking, trust operations, and nonbanking financial businesses of banks into different organizations. The second step in creating banks of manageable size is to separate the wholesale, money market business of these giant banks from their retail financing of modest-sized business activities. A third step in breaking up the giant banks would be to separate the various banking parts into units in the $5 billion class.

Further, the smaller banks should be unleashed and put in even terms with the giant banks. As things now stand the smaller banks—those with between $50 million and $1 billion in total assets—are more highly constrained than the big banks. The regulatory authorities do enforce a capital/asset ratio in the neighbor-

hood of 8 percent for these banks. They should be allowed to lower their capital/asset ratio to the same 6 percent ratio that will be imposed upon the giant banks profitability of smaller banks will increase.

Another needed reform is to remove the prohibition against merchant or investment banking from these smaller banks. This prohibition was based upon the misuse of power by the giant Wall Street banks in the 1920s and real ignorance of the comprehensive financing role that small bankers play on Main Street. Any program designed to make market capitalism work by structuring financial markets in favor of smaller-sized firms must come to grips with the barrier to the adequate financing of smaller units that results from the prohibition of investment-banking activities by smaller banks.

No system of structural institutional reform can promise eternal bliss; in an evolutionary environment such as an economy all reform can do is promise better. The fiscal policy proposals that followed from the standard reading of Keynes did give us twenty to thirty years in which we had a closer approximation to full employment than hitherto. During this period of relative tranquility destabilizing forces which are always characteristic of capitalism gained weight in the financial sector. It is now quite clear that without substantial reform of the banking and financial system, the degree of approximation to full employment achieved in the first postwar era will not be attainable.

STABILIZING THE ECONOMY

Whereas the events of 1966, 1970, and 1974–75 are anomalies from the viewpoint of the neoclassical synthesis, they are normal events within the alternative theory based upon Keynes's analysis of our type of economy. In the Keynesian theory it is to be expected that tranquil good times will lead to ever increasing ratios of speculative financial relations. This pattern will continue until the rising financial commitments, made worse by rising interest rates, cannot be sustained by the underlying income-generating process. At that time a break will occur, and with the break will come a threat of a deep depression.

The combination of lender-of-last-resort action by the Federal Reserve and the impact of big government meant that a big depression did not occur following the crises of the sixties and seventies. In order to prevent the future from being characterized by accelerating inflation and deepening recessions, the disruptive influences of finance—and in particular the giant banks—must be reduced. The only way in which this end can be achieved is by breaking up the present giant banks into units of controllable size.

Dissolving the giant banks is not a solution of the economic problems for all time; deeper structural reforms that eliminate the dependence of the economy upon giant capital-intensive corporations are also needed. But because of the existing unstable international financial system that has developed since the Federal Reserve accepted responsibility without power after the Franklin National Bank fiasco, there is an urgency to the need to understand how finance and instability are related so that more effective control of destabilizing forces can be achieved.

[From the Journal of Portfolio Management, Summer 1977]

BANKING AND A FRAGILE FINANCIAL ENVIRONMENT

Financial Malfunctioning is Normal in our System, Not an Aberrant: We would do Well to Recognize This Fact

(By Hyman P. Minsky)

In a serious discipline, no theory can have credence if it asserts that that which happens cannot happen. Yet, today's standard economic theory—what its major architect Paul Samuelson has labeled "the neoclassical synthesis" and what its leading critic Joan Robinson has aptly characterized as "Bastard Keynesianism"—not only offers no explanation of the financial crises that have plagued our history but inferentially denies that they occur.

Yet the existence of financial instability is the dominant fact that mandates a fundamental change in economic theory. More important, as I shall argue further in this paper, it mandates economic policy that is anchored in reality rather than in romantic theory. For financial crises have plagued our history. The Great Crash of 1929–1933 was different only in magnitude, not in kind, from

the financial panics of the preceding 150 years. In the most recent decade, three situations that can be characterized as nascent financial crises occurred: the credit crunch of 1966, the Penn Central/Chrysler/commercial paper run of 1970, and the billion dollar bank/REIT debacles of 1974–1975.

Despite the evident fragility of the structure of the banking system and the curious character of the system of regulation and control that centers around the Federal Reserve, neither the standard economic theory nor the views of the community of economists who shuffle in and out of policy advising roles ever seem to raise this crucial question: Are these events the result of processes that are *inherent* in our type of economy? To what extent is this evident malfunctioning *normal?*

On the contrary, most of the explanations of financial crises and system malfunctioning are essentially frivolous. They run in terms of villains, or of nonessential institutional flaws. Thus common explanations put forth by standard brand economists of the chronic inflation, persistent unemployment, and recurrent near financial crises of the past decade run in terms of the Federal Reserve not getting things right ("If only Arthur Burns had not gone 'all out' to re-elect Nixon in 1972!"), the cover-up of the costs of the Viet Nam adventure in the budgets of the mid 1960s, the perverse wage increasing behavior of trade unions, Nixon's opportunism and economic ignorance when controls were instituted, the destabilizing effects of flexible exchange rates, and the emergence of the oil cartel.

Nowhere in the standard economic theory is the question raised as to whether what has happened in the past decade is the result of processes that are inherent in our type of economy, i.e., that the evident malfunctioning is a normal phenomenon for our type of economy.

Economists concerned with economic policy were not always as superficial as the current crop of policy advisors. The proposals for 100% money by Chicago economists in the 1930s took financial instability seriously, but, because the school was pre-Keynesian, their prescriptions for change lacked a consistent theoretical underpinning. Even though they prescribed thoroughgoing financial reform as the medicine for an economy with financial instability, their economic theory did not allow for financial instability.[1] Nevertheless, the intuition of the Chicago School of the 1930s—that capitalism is flawed because of its financial system—is basically valid.

What Keynes provided in *The General Theory* was a stab at an explanation of how instability is generated in our type of economy. Keynes' explanation of how capitalism breeds instability was ignored as some of his ideas and constructs were assimilated into the "neo-classical" synthesis; because the current standard economic theory is based on only part of the structure of theory that Keynes developed, it is correctly labeled as an illegitimate offspring.

Financial instability has occurred with a wide range of institutional arrangements. For example, crashes occurred in 1857, 1893/4, 1907, and 1929/33. In 1857 there was no national banking system, in 1893/4 and 1907 there was no central bank, and in 1929/33 there was a central bank. By today's standard the government hardly existed as an economic force in 1857, 1893/4, 1907, and 1929/33. Trade unions did not have any effective power in the earlier epochs and the corporate form did not emerge as a leading form until the late 19th Century. *The wide variety of circumstances under which financial instability has occurred lends preemptory power to the hypothesis that financial instability is a deep-seated characteristic of a capitalist economy. It follows that only a theory that explains financial instability can be valid for our economy and be an effective guide to policy.*

INSTITUTIONAL SPECIFICATION

Our economy is capitalist. It is characterized by private ownership of the means of production, sophisticated finance, and the buying and selling of capital assets and financial instruments. Capital assets, both individually and as collected into plants and firms, have prices. Thus a capitalist economy has two sets of prices: one of current output and the second of capital assets and associated financial instruments.

These two sets of prices are formed in different markets and on the basis of different "parameters." The supply prices for current output mainly depend upon money wages and profit margins as determined by demand. The prices of capital assets are determined by the gross profits they are expected to earn, risk

[1] H. C. Simons, *Economic Policy for a Free Society*, Chicago, 1948.

premiums, and capitalization rates. Capitalization rates depend upon the relative supply of those assets that protect the holders against uncertainty (i.e., money), the subjective value placed upon the insurance that such assets yield, and the extent of financial commitments that lead to a demand for the monetary assets in which financial commitments are denominated.[2]

As the two sets of prices are determined in different markets and depend upon different variables, their ratios are free to vary. The cyclical behavior of the economy is largely determined by the alignment of the two sets of prices. Whenever the prices of capital assets rise relative to the prices of current output, investment increases. A fall in these price ratios leads to a decrease in investment. Through the multiplier, changes in investment become changes in aggregate demand.

Borrowing and lending of money based upon margins of safety is the essential financial usage of our economy. At any moment a maze of payment commitments denominated in money exists as a result of outstanding financial contracts. These contracts are traded and new contracts are created. The demand for money depends upon the convenience of holding "assets in the same standard as that in which future liabilities fall due."[3] An increased value placed upon this convenience leads to a fall in the prices of income earning financial and capital assets, whereas a decrease leads to a rise in these prices.[4]

The essential or primary private financial contracts arise when debts are used by businesses to finance positions in capital assets, either current or long-lived capital assets. These debts set up payment commitments. The behavior of the economy is affected by the relation between the cash payment commitments of these primary borrowers on existing debts and their anticipated cash receipts from the production of output. The ability of borrowers to meet commitments on financial contracts ultimately rests upon the profitability of enterprise: prices and costs must be such that almost always the profits of enterprise are sufficient to validate almost all financial contracts.

Layered finance also characterizes our economy. Financial organizations, which expect to make on the carry, borrow to hold financial instruments. To do this, their liabilities must be deemed safer or more convenient by ultimate wealth owners than their assets. This usually translates into their assets being of longer-term than their liabilities and the provision of various margins of safety by the financial organizations, including the margins of safety that portfolio diversification and specialization in the management and analysis of particular classes of assets make possible.

One observable margin of safety that such financial firms maintain consists of cash buffers and stocks of financial assets that can be sold in "money markets." Financial crises usually occur when some financial transactions, such as the sale of assets or new borrowing, which were expected to yield cash cannot be executed.

THE PROFIT EQUATION OF BANKS

Banks are profit maximizing organizations. Their return on the book value of owners' equity equals the return per dollar of assets times their assets per dollar of book value; i.e., $P/B = (P/A)(A/B)$ where P is profits, B is the book value of owners equity, and A is assets. Given this profit identity, bank management endeavors to increase profits per dollar of assets and assets per dollar of equity.

Profits per dollar of assets depends upon the bank's efficiency in operations, the return after losses on assets, and the price paid for the various types of deposits. Bank management is efficient to the extent that it minimizes the cost of operations and the prices it pays for deposits and maximizes the return on assets net of losses. The terms on deposits and the interest rate on assets are largely determined by market forces. The success of bank management in the mixed game of skill and chance in which it is engaged depends upon its ability to have a mix of deposits that minimizes the cost of money even as it selects assets that minimize its losses because of default and the restructuring of debts.

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[2] J. M. Keynes, *The General Theory of Employment, Interest and Money*, New York, 1936. The specification in the text of what determines the capitalization rates is an interpretation of the material Keynes covered under the rubric of liquidity preference. In this view, liquidity preference cannot be interpreted as a demand for money equation; liquidity preference is the label for the market processes that determine the relative prices of capital and financial assets.

[3] Ibid., p. 37.

[4] Ibid., Chapter 17. See H. P. Minsky, *John Maynard Keynes*, Columbia Essays on the Great Economists Series, New York, 1975.

A banker handles other peoples' money along with his own. The inverse of the assets/book value ratio, the book value/assets ratio, tells how much of the banker's money is being invested along with other peoples' money as the banker goes about his business. The book value/assets ratio is analogous to the margin requirement imposed upon stock market purchases. If bank deposits were not insured by a government agency, the book value/assets ratio would indicate the maximum loss that a bank could take on its assets and still be able to fulfill its commitments to its depositors.

In a world in which the socialization of risk through government underwritten deposit insurance did not exist, the book value/asset ratio would be one of the margins of safety that make depositors and other banks willing to hold liabilities of a particular bank. In these circumstances, depositor and collegiate surveillance would act to constrain the attenuation of the book value/asset ratio. In a world in which socialized deposit insurance exists, such market and collegiate surveillance withers away. In such a world, the book value/asset ratio is equivalent to the coinsurance that an insurer may require in situations where there is a good measure of moral hazard involved in insurance, i.e., when the insured can arrange for the situation that activates the insurance to occur. If the insuring authorities are not vigilant in enforcing an asset/equity ratio, the profits of those banks that can raise their asset/book value ratio will increase even as the margin of safety they provide the insuring agency decreases.[5]

BANK PROFITS VS. ECONOMIC POLICY

Our banks are corporations. The market price of their publicly traded shares, like the shares of other companies, is positively related to the expected rate of growth of earnings. If the level, rate of growth, and assuredness of bank earnings are high enough, then the market valuation of the bank's shares will exceed the book value of owners' equity. To first raise the ratio of market price to book and then sustain a favorable growth in the market price of shares require a high rate of growth in expected earnings per share. Because of stock ownership and stock options, management of a bank that is organized as a corporation has a private interest in ever higher share prices—in having the market value of the owner's interest rise relative to the book value of owner's interest. This emphasis upon accelerating growth in order to affect the market valuation of shares is not present for banks that are organized as partnerships: a partner's interest, as the partnership is periodically reconstituted, is a proportionate share of the book value. As will become evident in what follows, banking as a generic phenomenon is destabilizing, but corporate banking, especially corporate banking in which management is largely divorced from ownership, is particularly destabilizing.

Earnings minus dividends divided by book value is the rate of growth of book value through retained earnings. If assets grow as fast as book value and if the profit rate on assets remains unchanged, then earnings, dividends, and the book value of equity can grow at the same rate. For example, a bank that makes 1% on assets and has a 12 to 1 asset/book value ratio earns 12% on book value. If dividends are one third of earnings, book value will grow at 8%. For the same asset/book value to be retained, bank liabilities other than book value and assets will have to grow at 8%.

If the normal return on assets with no growth in earnings prospects and with the safety and assurance features of bank stocks is 15%, then the market value of this bank's shares would be a 12/15 or 80% of its book value. Given that the bank in this example has an assured growth rate of 8% per annum, however, the market valuation of the bank's shares will be 12/(15-8) or approximately 170% of book value.[6] If management can sustain earnings per dollar of assets even as the assets per dollar of book value increases, they can raise the price of their shares. Thus, if management can shift to a 15 to 1 asset/book value ratio, the market price of the shares, on a no growth basis, will rise to 100% of book value and, on a growth basis (assuming ⅓ dividend payout), to 15/(15–10) or 300%

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[5] The very high asset/book value ratios that the giant banks are able to sustain after the Franklin National debacle are mainly a result of the way the Federal Reserve validated all deposit liabilities—including bought money in the overseas branch—as Franklin National failed. See H. P. Minsky, "How Standard is Standard Economics?", *Society*, March/April, 1977, pp. 24–29.

[6] As is well-known, the present value of $1 in perpetuity is $1/r, where "r" is the normal return on assets in the assigned risk class. If the expected return is expected to grow at g% per year and g is less than r, then the present value of such an income stream is 1/r–g.

of book.[7] Note that in the growth context the price per share will well nigh double with the higher asset/book value ratio. The incentive for bank management to raise the asset/book value ratio, if it can be transformed into an increase in the rate of growth of assets and earnings, is strong. In fact, it will pay for a bank to increase the asset/book value ratio even if it results in some attenuation of the earnings/assets ratio.

Management's growth targets are likely to be greater than the deposit growth rate that the Federal Reserve desires. A conflict is likely to arise between the profit and share price objectives of bankers and the economic policy objectives of the Federal Reserve. As is well-known, Milton Friedman and other monetarists have argued that there is a desired rate of growth of the money supply. Even though they have set this magic number at different rates at different times, their views may be fairly represented by assuming a 4% target for monetary growth. In our example, a banking system that consists of banks that earn 12% on book value and pay dividends of 4% on book would try to grow at 8%, whereas the Federal Reserve might very well set a 4% monetarist type target for monetary growth. In this situation, bank management would endeavor to develop a liability mix that would enable assets to grow at 8% or more even as the Federal Reserve allows the reserve base to grow at 4%.

Over the post-war era, bank management has been ingenious in developing reserve-economizing liabilities, so that the growth of bank assets has exceeded not only the growth objectives of the Federal Reserve but also the growth of bank equity. This power of banks to evade monetary constraint imposed by the Federal Reserve authorities is one reason for chronic inflationary pressures. In a world with corporate, growth oriented banking and a fragile financial structure, the Federal Reserve is forced into accommodating the banking system's demand for reserves. The banking process determines the volume of bank liabilities outstanding, and the Federal Reserve is forced to supply sufficient reserves to sustain these liabilities.

Banks have also been ingenious in developing techniques for financing business and financial institutions. These include the developing of covert bank liabilities, such as lines of credit and bank guarantees of financing. The development of extrabank financial institutions, such as the REITs, depended upon the prior availability of bank guarantees.

During periods of banking and financial innovation, the supply schedule of credit to business is virtually infinitely elastic.[8] The availability of financing leads to increases in 1) capital asset prices relative to income, 2) the demand for investment goods, and 3) investment activity that is financed. The period in which a virtually infinitely elastic supply of credit exists is transitory, however, for the ever increasing amount of investment that is financed will lead to first an inflation in prices relative to wages and then to a wage inflation.

The feedbacks from inflation to balance sheets strip firms and financial institutions of liquidity, which triggers an explosion of money market interest rates. Such an explosion can make the interest costs of inherited debt positions greater than the cash flows from operations. Profit maximizing banking in general and corporate banking in particular are active forces creating conditions conducive to a financial crisis.

HEDGE, SPECULATIVE, AND PONZI FINANCE

In order to understand how banking and financial considerations lead to situations that are conducive to instability, it is necessary to investigate the cash flow implications of financing relations.

The liabilities of a unit lead to a time series of cash payments, on account of both principal and interest, that have to be made. The cash to make such payments can be on hand or obtained from (1) the operations of the unit, (2) the fulfillment of owned contracts, (3) the sale of assets, or (4) the issuance of debt.

A unit is hedge financing if, over each significant period, cash receipts from operations or contract fulfillment are expected to exceed cash payments. A firm that has virtually no short-term debt and mainly equity liabilities is hedge financing.

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[7] Bank stocks do not sell at 300% of book because: 1) investors really do not believe that these growth rates will be sustained in perpetuity, and 2) the ability of new funds to enter into banking and near-banking means that the rate of growth of existing banks will eventually return to more moderate levels.

[8] H. P. Minsky, "Central Banking and Money Market Changes," *Quart. J. Econ.* (71), May, 1957, pp. 171–187.

A unit is speculative financing if cash payments exceed the expected receipts over some typically near-term period, at the same time as the present value of the expected cash flows from assets exceeds the present value of cash payments over the whole life of the outstanding debts. This situation exists because short-term debt is outstanding and the principal of some of this debt is due. Speculative financing units can have a positive and increasing net worth because of retained earnings. Both the borrower and the lender expect, and they expected it when financing was arranged, that the debtor will borrow to pay maturing debt: debt refinancing is a way of life.

A "Ponzi" financing unit is a speculative financing unit for which the interest portion of its near-term payment commitments exceeds its net income receipts. A "Ponzi" unit will have to increase its outstanding debt, sell off assets, or reduce its cash holdings in order to meet commitments. "Ponzi" financing units may be "fraudulent" and have a "negative net worth"; however, "legitimate" units engage in "Ponzi" finance if "accruals" account for a large part of income and dividends are paid.

Hedge financing units are only vulnerable to what happens to their operating revenues and costs (or whether terms on contracts are fulfilled); speculative and "Ponzi" financing units, on the other hand, are also vulnerable to what happens in financial markets. "Ponzi" finance units have to sustain a belief by creditors that the current cash flow deficit is a transitory phenomenon.

Commercial banks and other financial institutions engage in speculative finance: the term to maturity of their debts is shorter than that of their assets. They need to continually attract deposits and sell liabilities in order to be able to meet withdrawals. The short term of their debts means that they are vulnerable to financial market developments. Furthermore, even though the assets of banks are of longer term than their liabilities, their assets are of shorter term than the mass of capital and financial assets owned by units that are bank financing. Thus the greater the weights of banking and other financial intermediaries in the economy, the greater the weight of speculative financial relations in the financing of business and households. Not only do banks engage in speculative finance, but they are the transmission belt toward speculative financing by others.

The relative importance of hedge, speculative, and "Ponzi" finance determines where an economy is on the scale of financial robustness-fragility. The greater the proportion of speculative and "Ponzi" finance in the economy, the more fragile the financial structure. The greater the weight of bank financing of business and of business short-term debt, such as open market paper, in the economy, the more fragile the financial structure.

FINANCIAL INVESTMENT

An investment program for tangible assets is like a financial contract. Cash payments have to be made as work on the program progresses, and cash from operations will not be received until after the investment is completed. Investment is like a money loan in that it is a money out today-money in tomorrow deal. The payments for investment in progress have to be financed. Investment can be financed internally, from the cash flows of investing units, or externally, by various types of borrowing. For much of investment, and in particular for construction, short-term borrowing takes place when investment is being produced, and then long-term financing of the finished capital assets yields the cash to repay short-term debts; the funds to pay debt are obtained by new debt.

The cash required at specified dates or stages of an investment program constitutes a particularly inelastic demand for funds. If the supply of finance is constrained when a great deal of investment is in progress and requires external funds, interest rates, particularly short-term interest rates, can rise very high, very quickly. A sharp rise of short-term rates is a normal functioning result of an investment boom.

A large amount of external financing of investment tends to increase the speculative nature of the financial structure. The viability of any investment project will be adversely affected by a lengthening of its gestation period, an increase in its production cost, an increase in the ratio of external to internal financing, and an increase in interest rates. When fixed investment greatly exceeds the internal cash flows of investing corporations, an incipient financial crisis can be triggered by normal market processes that increase short-term interest rates. The flow of funds data show that fixed investment far exceeded the internal funds of non-

financial corporations throughout the late 1960s and the early 1970s—the era of the post-World War II financial crunches, squeezes, and debacles.

MARGINS OF SAFETY

Our economy is characterized by borrowing and lending based upon margins of safety. The margins of safety borrowers and lenders require are largely based upon custom, and thus history. The accepted margins reflect interpretations of flimsy evidence about various contingencies that confront borrowers and lenders.[9] Both the evidence and the interpretations are subject to change.

We can identify three "margins" of safety: "cash" in portfolios, excess of cash receipts over cash payment commitments, and an excess of the present value of future receipts over that of future payments. A hedge financing unit has an excess of cash receipts over cash payment commitments as a result of debts over every period. The present value of these positive cash flows will be positive for every interest rate configuration. A speculative finance unit has deficit cash flows in near periods and surplus cash flows in later periods. A positive present value depends upon interest rates that fluctuate within some bounds. There exist interest rate configurations that will transform a speculative unit into a negative present value unit.

In the 1970s, inflation and high interest rates stripped cash and present value margins of safety shrank. During the great depressions of history, margins of labor and material costs, increased in these years, the cash margins were used to meet commitments. Furthermore, the rise in interest rates, by increasing the carrying costs of outstanding debt, meant that some speculative finance units became "covert Ponzi" units.

During good times, and as an essential part of the process by which good times are financed, margins of safety are eroded. An inflationary burst, such as characterizes an investment boom, will see margins of safety disappear. The panics and crises of history took place as units attempted to fulfill commitments even as margins of safety shrank. During the great depressions of history, margins of safety were rebuilt. In our era, massive government deficits during "recessions" rebuild the margins of safety in portfolios, although the experience in the past decade indicates that the rebuilding of these margins is incomplete.

PRESENT VALUES

Investment is a peculiar money today-money tomorrow contract. The money today is spent as the investment good is produced, and the gross profit that will be received when the completed capital asset is used in production is the money tomorrow.

Interest on sunk costs is part of the cost of investment. Rising interest rates raise the cost of an investment good and lower the capitalized value of the returns that an investment good will earn as a capital asset. A present value reversal, which makes the value of the capital asset less than the cost of the investment good, can occur as interest rates rise. When this happens, the short-term debt that is used to finance the investment in process cannot be turned over, and additional debt required to complete the project cannot be placed. Investment financing provides the internal mechanism that can trigger a financial crisis and a downturn in income. The mechanism is part of an essential attribute of capitalism: the use of short-term debt to finance work in progress.

An economy heavily "into" speculative finance and investment in excess of corporate internal funds is "set up" for a financial crisis. The trend increase since 1946, and the rapid rise since 1964, in short-term financing and in the ratio of investment to corporate internal funds are the endogenous developments that have made our economy crisis prone. Bank management's shift from asset management to liability management and on to line of credit banking is part of the mechanism by which profit maximizing banking facilitated the development of a fragile financial structure which led to the near crises of the past decade.

INSTABILITY; INEVITABLE BUT NOT INEVITABLY DISASTROUS

Banking was not an innocent bystander in the generation of our fragile financial structure. Banking is an active disrupting force that helps create conditions

[9] J. M. Keynes, "The General Theory of Employment," *Quart. J. Econ.* (51), February, 1937, pp. 209–223. J. Viner, "Mr. Keynes on the Causes of Employment," *Quart. J. Econ.* (51), November, 1936, pp. 147–167.

conducive to financial instability as bankers actively pursued profits and capital gains through increased leverage.

If the thrust towards instability is to be constrained, economic policy must deal with reality and not be blinded by the abstractions of neoclassical theory. Federal Reserve policy must be based upon an awareness of the banking and financial mechanisms that make financial instability possible. The Federal Reserve cannot pursue target values of an ill-designed construct such as the money supply in an effort to achieve economic stability nad cavalierly neglect how the viability of financial relations, the economic structure, and the pattern of system reactions are affected by changes in interest rates and its own behavior. As a first step in making the system less susceptible to financial instability, the Federal Reserve must adopt a money *market* perspective and abandon its myopic concern with the money *supply*.

In the recent failures and near-failures of four banks that were in the billion dollar and larger class, the Federal Reserve and the Federal Deposit Insurance Company validated all of the nonequity liabilities at both the domestic and foreign branches of these banks. Depositor's risk was effectively socialized; as a result, the need for depositor and collegiate surveillance of bank practices virtually vanished. The procedures used by the Federal Reserve and the F.D.I.C. to abort the financial crisis of 1974/75 virtually assure that market constraints upon bank behavior will be weak, once the fears induced by the near misses of 1974/75 are attenuated. Indeed, the way in which Franklin National and the REIT "failures" were handled virtually assures that similar crisis situations will occur again soon.

An insurer has a right to require reasonable precautions and co-insurance by the insured. The authorities have a right to require a reasonable margin of safety from insured banks. The margin of safety that banks provide their insurer can be measured by their book value/asset ratio. The attentuation of book value/asset ratios over the past decade was an essential ingredient in the financing of inflation and the generation of instability. The use of covert bank financing by means of lines of credit meant that the measured asset/book value ratios understated bank exposure. Furthermore "bubbles" such as the REITs are able to develop because of the explosion of covert bank liabilities in the early 1970s.

In order to decrease the likelihood of financial instability, bank regulation and control has to establish reasonable constraints on the asset/book value ratio of banks and on line of credit banking. Wherever examiners have power—which is over the smaller banks—asset/book value ratios are constrained to a 12 or 14 to 1 range. This is less than half the asset/book value ratios of many giant banks. The establishment and maintenance of a reasonable and common asset/book value ratio for all banks will attenuate the thrust toward instability. It will also remove an unfair competitive advantage that giant banks and thus giant business have over smaller banks and business.

Once a common and appropriate asset/book value is realized for all banks, the growth of bank capital through retained earnings will have to be constrained to a rate that is consistent with the noninflationary growth capabilities of the economy.

In dealing with banking, we should keep in mind the remark of the great University of Chicago economist, Henry C. Simons, that "Banking is a pervasive phenomenon, not something to be dealt with merely by legislation directed at what we call banks." [10] A fundamental flaw exists in an economy with capitalist financial institutions, for no matter how ingenious and perceptive Central Bankers may be, the speculative and innovative elements of capitalism will eventually lead to financial usages and relations that are conducive to instability.

Thus it is doubtful that we can ever completely eliminate the possibility of financial crises and deep depressions within a capitalist framework. By constraining the ability of bankers to finance speculative investment booms, however, we can achieve an economy that is significantly less susceptible to crises and thus to the threat of a deep depression than is true at present. Even though a finely tuned state of permanent prosperity is not attainable, it is possible to do significantly better than we have in the past decade.

Representative BOLLING. Thank you.

Next we have Prof. Benjamin Friedman, associate professor of economics, Harvard University. He has been a summa cum laude graduate of Harvard, a Marshall Scholar at Kings College, Cam-

[10] H. C. Simons, op. cit., p. 172.

bridge, England, where he received a master of science degree and junior fellow of Harvard's Society of Fellows.

His doctorate in economics at Harvard was awarded in 1971. He has been on the Harvard faculty since 1972 and has been associated with the Board of Governors of the Federal Reserve System as an academic consultant since 1974.

Please proceed, Mr. Friedman.

STATEMENT OF BENJAMIN M. FRIEDMAN, ASSOCIATE PROFESSOR OF ECONOMICS, HARVARD UNIVERSITY

Mr. FRIEDMAN. Thank you, Mr. Chairman.

Let me begin by saying that I heartily applaud the interest which this committee is showing by having these hearings on the medium to longer run problems associated with inflation and monetary policy. All too often the political process, as well as the business community and even academicians, focus on short-run considerations. An opportunity to focus on long-run considerations is extremely useful.

I can briefly summarize my views in five basic propositions: One, aggregate demand conditions do matter for inflation in the medium and long run, and they matter very much.

Proposition 2, monetary policy is a key determinant of aggregate demand, and hence of inflation, within this timeframe.

Proposition 3, on its own, monetary policy can break the momentum of a deeply ingrained ongoing inflation, and it can sustain price stability, but only at the expense of costs including risks of financial instability; therefore, other policy tools are important as well.

Proposition 4, potential technological changes, such as the introduction of an electronic funds transfer system, may complicate the rôle of monetary policy, and therefore we need to be especially watchful and broadminded in the techniques we choose for implementing monetary policy within the next several years.

Finally, proposition 5, aggregate supply conditions also matter for inflation in the medium to longer run as well as demand conditions, and therefore such aspects of policy as the fiscal-monetary mix and incentives to investment and productivity are also important elements of anti-inflation policies within this timeframe.

Let me elaborate. First, on the relationship of aggregate demand to inflation, I think that it is unfortunate that the current short-run orientation in much of our public policy discussion has led us to believe that aggregate demand has nothing to do with inflation. Years ago, Arthur Burns said that inflation does not necessarily wait for full employment, and nowadays the popular view is that inflation does not even care if full employment is coming along on the trip, much less wait for it. That popular view may be correct for the short run, because inflation in the short run is a process which is subject to drastic shocks from all sorts of areas. Also, inflation has an overwhelming built-in inertia process which is very difficult to beat in the short run. In any medium- to long-run context, however, such as the one you asked about in your letter setting the questions for this hearing, all of the available evidence indicates that aggregate demand matters, and matters very much, for the inflation picture. I will cite only one piece of recently assembled evidence for not only the United

States but also six major European and Japanese economies. Over the last 15 years, which is the period within which the Phillips curve is believed to have broken down, a recent study by the National Bureau of Economic Research shows that there was a consistent, regular relationship between either the acceleration or deceleration of inflation on the one hand, and either above-trend or below-trend economic growth on the other. In the short run we may lose sight of it, but in any longer timeframe aggregate demand matters, and matters very much.

Next, on the relationship of monetary policy to price inflation, it is certainly true that in a longer timeframe high rates of money growth inevitably lead to high rates of price inflation and vice versa. This relationship does not come about—as some suggest—by any mysterious direct linkage between money and prices, but rather because, over long time periods, rapid rate of monetary growth affect demand and therefore affect prices. The immediate conclusion is that, over a long timeframe, stable money growth is an immediate necessary condition for stable prices; and the data that I cited simply provide evidence in this regard. A further point to be made about the medium- to long-run role of monetary policy is that the kinds of difficulties of managing the money supply that economists like me often emphasize in short-run discussions are, I think, not very important in a several-year-or-longer timeframe. While I am usually eager to tell the Senate Banking Committee about how the Federal Reserve cannot peg the money stock very well over the next 6 to 12 months, for a period of 2–5 years I am convinced that the Federal Reserve can achieve whatever growth rate it wants without much technical difficulty.

Third, what are the costs of a policy which relies only on monetary policy as a way of either breaking the back of an ingrained inflation or preserving price stability once we have inflation back under control? I would argue, for reasons which parallel what Professor Minsky said a few minutes ago, that the potential risks of purely monetary attacks on inflation could be very great. The effects of aggregate demand on inflation are such that, once inflation is built-in, an enormous amount of economic slack is necessary to break it. If we try to break inflation through demand management, doing so would require sharply lowering or at least holding steady the rate of growth of the money stock. If inflation happens to accelerate next year, that would lead to a substantial credit crunch, as bad as in 1974 or even worse. The risks of financial instability, which your letter questioned, would be severe if we have no device to attack inflation other than nonaccommodative monetary policy. What conclusion follows from this analysis? While monetary policy in the right direction is a necessary element in an anti-inflationary policy, it is highly risky to let that policy rely on tight money growth only.

My fourth proposition has to do with potential technological changes that could pose problems for monetary policy. In the short run the relationship between money and GNP growth is extremely undependable. This difficulty usually is called the velocity problem. Since the relationship is not very good in the short run, monetary velocity is highly volatile. In the long term, however, velocity seems to move substantially more regularly, so that in the longer run one would typically think that the rate of growth of the money stock would

pretty well pin down the rate of growth of GNP. That is true only if there is no substantial changes in the underlying financial technology. I call your attention to this point only because, within the next decade, we will be moving to an electronic funds transfer system, and no one knows—or can know—what effects that technological change will have on the money holding behavior of the public or on the relationship between money and GNP. Similarly, we now have payment of interest on demand deposit, or something very close to it, and the Federal Reserve has announced its intention to investigate the possibility of interest on bank reserves. Similarly, we do not know, and cannot know now, what those changes would do to the relationship of money to GNP. The conclusion here is that we should be broad-minded and willing to jettison quickly the kind of money growth policy strategy that we have been pursuing over the last 5 to 6 years.

Finally, aggregate supply has become a familiar story since the oil crisis, but I do want to emphasize it in this context because, over the time frame of the next half decade and longer, it is certainly not the case that aggregate supply is fixed. In the shortrun context we think primarily of moving aggregate demand because there is not much we can do about aggregate supply. After all, inflation is what happens if demand exceeds supply. Over a medium to a longer run time, we can indeed influence the supply, too. One way to look at this problem is to ask what is the economy's sustainable real growth rate; that question would be interesting in some contexts. In the context of the problem posed in your letter, however, perhaps a better way to look at it is to ask what is the unemployment rate which we have to force ourselves to live with in order to feel confident that inflation is not going to accelerate further. Steps to increase productivity and to promote capital formation, and to avoid drains on capital through nonproductive investments, can help make sure that whatever unemployment rate we must accept to avoid accelerating inflation is as low as we can possibly achieve.

Finally, I want to conclude by making an observation and thereby raising yet a further question. It is clear that the way monetary policy works to stop inflation in the long run is such that the policy would work much better if the public, by which I mean not only ordinary citizens but also the person making investment decisions, have confidence that the anti-inflationary policy is here to stay. Nothing vitiates a policy of this kind so much as the feeling that that is the policy of today, while the policy tomorrow is going to be something else. The problem then becomes how do we know that the policy is here to stay. At the level of popular opinion the issue is: Do we have the political will to mount and sustain an ongoing attack on inflation and to make it stick? The public opinion polls say we do, but I wonder whether they are truly indicative. The problem is that the costs of inflation are very intangible and very difficult to pin down. They are mostly redistributions, in which we usually talk about the losers; but redistribution means that for every loser there is a winner, at least in the short run. In the long run there are substantial losers in excess of winners, but figuring out what the costs of inflation are and finding a public consensus that those costs are high to sustain is a necessary ingredient to achieving a public conviction that the inflation process is under a sustained attack that is here to stay. While I do not want to suggest

that expectations are necessarily self-fulfilling, if the public really believes that a sustained attack on inflation is in progress that would make the job that monetary policy has to do to fight inflation all the easier and would make the risks all the less.

Thank you, Mr. Chairman.

Representative BOLLING. Thank you very much.

I would like to begin by asking Mr. Minsky a question due to my own ignorance. This is my weakest area. I don't claim to be an economist, just a political economist. I need to know some things.

In your statement, next to the last page—the second sentence in the first full paragraph—there are few words and a lot said. I want to be sure I understand it.

> To decrease the emphasis on debt, the full employment rather than economic growth should become the proximate objective of policy; * * *.

Now, I would like you to explain that to me. I don't understand exactly what you mean.

Mr. MINSKY. I don't believe it is an accident that we have had increased instability and increased inflation since the emphasis shifted toward economic growth during the Kennedy-Johnson administration.

Everything that you do to encourage investment encourages debt financing. This increases instability. The simple example is that during the 10 years it takes to put a nuclear powerplant onstream the workers producing that nuclear powerplant are receiving income, spending that income on consumer goods, and not producing any consumer goods in exchange. So every time you increase the ratio of investment expenditures to consumer goods expenditures in the economy, prices rise. Any time a higher proportion of a wage bill is used to pay for people who are earning investment income compared to the wage bill that is used in the production of consumer goods, consumer goods prices will increase. This, in turn, means that the wages of workers will go up. This is a very simple idea.

It takes 10 years before you get a kilowatt out of a nuclear powerplant. People all the way back to the producers of input into that complicated thing meanwhile are spending. Every time you build a plant that does not quickly pay off you are producing inflation in the country.

Every time England goes out and builds a Concorde you produce inflation. Any banker and businessman knows that for every investment project worth doing there are thousands that are not. Everything you do to increase growth by way of increasing investment, offer incentives to undertake things that are not worth doing in a pure private account you produce inflation.

Representative BOLLING. My other question is different. It is a different kind of ignorance on my part. It is just a lack of knowledge. In the next paragraph:

> The rise in bank credit that was made possible by a rise in the asset-equity ratio of the giant banks has been a destabilizing influence over the past decade.

To skip a sentence and go on to the rest of the sentence:

> To establish some Federal Reserve control over destabilizing credit expansion by giant banks, the Federal Reserve and the FDIC should have the authority to set ceilings on the asset-equity ratios of banks.

I understand how it works now. I am curious as to what would

happen if that kind of change were made. What is the response going to be from the banks? This is initially addressed to you and then I would like to have the other panelists comment on your response and also your whole statement because my impression is that it is hard to fault but I would expect there would be some disagreement from the other panelists. I want to clear up my ignorance before we go to that.

Mr. MINSKY. I happen to be a director and an adviser to a bank-holding company in Missouri. We worry about expansion. The bank examiners came in and told us about our capital adequacy. We are constrained pretty much to a 7- or 8-percent equity to total asset ratio. I would like you to take a look at the total asset ratio of American banks, in particular, the giant city banks, the overt assets. An equity ratio, not the covert liabilities they have or the covert assets.

We will find they are down to 3, 4 percent. I think J. P. Morgan is the giant bank with 5 percent. To me this is a bias in our banking regulations and institutions in favor of giant banks and giant banks have a relationship with giant corporations.

The financial conditions of giant corporations are made easier by the higher asset-equity ratio that the giant banks can work with. Banks have to make profits. It is not an evil word. The typical target is 12 to 15 percent on equity. The simple profit equation is the income per dollar of assets times the assets per dollar of equity.

If you have $30 assets per dollar of equity you can make 15 percent by making one-half of 1 percent on assets. If you have $12 of assets per dollar of equity you have to make in excess of 1 percent to make the same 15 percent target. The markup has to be higher on the cost of funds for the smaller banks than the larger banks. It is very simple arithmetic.

Second, I don't look at M1 or M2 as the determinant of how banking affects the economy. Not long ago, I was talking to the chief economist of one of the two giant Chicago banks. Only 20 percent of their liability would conform to M1 or M2 today; 80 percent of their liabilities are not part of M1. Citicorp has a majority of visible liabilities overseas, 50 percent of its liabilities are even outside of our money supply. One of the interesting factors pointed out to me recently is that an increase in proportion of the cash balances of giant corporations of the United States are now in offshore deposits.

Their money holdings are not part of the U.S. money supply. All of these things are part of the way in which the banking system acts as an independent disruptive force during this period.

Let us not fool ourselves. Bankers are out to make money. They are soliciting loans. They are merchants of debt. What each banker does for his own self-interest in the aggregate has a disruptive influence on the economy.

The flaw that we are talking about is also one of the virtues of our economy—of the market. It makes the decisions decentralized. But the market has to be constrained and controlled. When you finance more investment by means of debt you put more upward expansion in the economy and generate more inflation. It is not the only cause of inflation. Supply conditions are important. But don't forget the fundamental thing I am taking about existed throughout our history.

It does not depend on our particular institution of today. We had it without the unified banking system in 1857. You have it under the

national banking. You had it with the Federal Reserve working under the pre-1935 legislation. You have it again now. We now know how to avoid it. So instead of having big depressions, we have inflation. Is that clear?

Representative BOLLING. That is clear to me.

Mr. MINSKY. It is not clear to Mr. Olsen.

Representative BOLLING. It makes the problem we are addressing, it does stand out, infinitely more difficult to deal with politically. I want to give the others an opportunity to get involved. Why don't you proceed as you like. I will apologize at this point for progress. [The sound of jackhammers.] You hear it. I don't think there is very much you can do about it. They are still building something around here. We just have to put up with this noise.

Mr. OLSEN. Mr. Minsky has made a couple of comments and it is difficult to respond to all of them. I don't know that it is useful to take the experience of an individual banking institution and generalize from that. He mentioned Citibank. I will tell you there is no decrease in our capital ratio. In fact, it has been improving. But beyond that, I don't believe that any significant rise in assets to equity ratio initiates the increases in total debt or certainly not the bank debt of the United States independent of what the Federal Reserve does to the reserves of the banking system.

The commercial banking industry does not have the capacity to independently increase its liability and assets beyond what is supported by the monetary base over which the Federal Reserve has direct control

I was also intrigued with the asset-equity ratio rather than the asset-capital ratio because there has clearly been a shift toward the use of debt instruments in the capital structure in the commercial banks in the last 20 years. I don't see any reason why one should condemn the use of debt capital in banking. The fact that the banks have employed different instruments to increase their liability such as certificates of deposit—CD's—and others is simply substitution for other types of deposits that would not have occurred independent of the increase in the reserve base of the commercial banking industry.

With regard to the liabilities that are on the balance sheets of banks outside of the United States, here again, Professor Minsky specifically speaks of U.S. banks only but omits entirely the dollar deposits of foreign banks outside of the United States.

I was just intrigued by the exclusiveness of the U.S. banks alone. But apart from that, deposits resident in offshore institutions are based on, in fact, our domestic money supply.

Those deposits outside of the United States do not represent a net potential addition to our money supply which would increase if suddenly those deposits came back into the United States. They are very much part of the U.S. money supply.

You asked a specific question earlier, Mr. Chairman, about what would occur if the authorities were to place an arbitrary ceiling on increases in the assets to equity ratio. Actually such policies are practiced in some other countries of the world. It leads to a confusion between credit policy and monetary policy. We have been countries, for example, that have put several ceilings in effect and insisted this was monetary policy when it was not.

When the monetary authorities in any country limit banks on the amount of certain kinds of assets they can accumulate, such as loans to business, but at the same time continue to pursue an expansionary monetary policy by simply printing more currency or more money—in fact, what they simply do is alter the structure of financial assets in the marketplace.

Invariably what occurs then is that banks acquire more Government securities, for example. The limitation is placed on the amount loans the commercial banks may make but there is no limitation on the amount of Government securities which they can acquire. As they buy existing Government securities they provide new liquidity to the seller of the securities.

Incidentally, the normal formula to use is the risk asset rather than simply the asset to capital ratio. So when you have such a credit policy in effect it is often very misleading and leads to the confusion that the restrictive monetary policy is in place while at the same time the printing presses may be running faster than before.

It leads to confusion and misunderstanding about what kinds of policies are being pursued and it leaves room for the policymakers to expand policy particularly for Government debt while seeking to restrain the private sector.

Representative BOLLING. Professor Friedman, would you like to comment on any of this or all of it?

Mr. FRIEDMAN. Yes, sir. First, you asked for an appraisal of Professor Minsky's overall position.

While I do not want to get into competition with Professor Minsky for the role of the Chicken Little of modern economics, I do think that the risks of financial instability which his work in general has emphasized, and which are the core of his presentation this morning, are very serious risks. Moreover, inflation worsens them in two ways, both because inflation increases these risks per se, and because Government policy aimed at shielding the economy from these risks often turns out to be inflationary. So, on both sides I think he is describing something that is very important and essential to inflation.

Let me also comment on a few other particular issues. First, you had focused on the question of reform of laws and regulations which encourage debt financing. I think that that is useful. In the corporate financing structure of this country, the fact that over the last 20 years the investment banking industry has been primarily a debt-raising mechanism rather than an equity-raising instrument can be traced immediately to the differential tax treatment of debt and equity. When we have taxes that make it cheaper to finance by debt rather than equity, we cannot be surprised when corporations arrange their capital structures accordingly. On whether a high-debt capital structure is inherently inflationary or not, however, I would not agree with Professor Minsky that the effect of investment in new assets is necessarily inflationary because it will presumably be debt financed. The consequence for inflation is that debt increases risks, and the Government then protects the economy from potential realization of that risk by undertaking policies which are themselves inflationary. The Franklin National Bank episode is a key example of this. Rather than allow people to lose money in the Franklin National Bank, and expose not only our economy but also the international exchange economy and the world

monetary system to the potential ripple effect, the Federal Reserve immediately ran up a $1.7 billion increase in bank reserves. This process takes place in other less obvious forms all the time. What is inflationary about debt financing is, therefore, the risks which it poses together with the Government's response to protect the economy from the risks.

Next, the question arose whether it is interesting to look at the credit side of balance sheets. I believe that it is. I have always been mystified by people who believe that all useful information comes only from the liability side of the banking system's balance sheet. Money matters. Credit also matters. Over a long period of time the two typically move together; but, to the extent that money does one thing and credit does something else, I would think that both are highly important for economic activity.

Next, you asked about Prof. Minsky's suggestion of required asset-equity ratios. Here I would be more comfortable with Mr. Olsen's suggestion of an asset-capital ratio for banks. I would be in favor of that, but as a low-priority item. The reason I would be in favor of it is that, because the Government in effect guarantees that banks will not fail, we cannot be sure that banks will conduct their affairs with the wisdom that nonguaranteed institutions would have. If the Government were actually prepared to see a large bank fail, then I would be less concerned about the need to have regulation on asset-capital ratios since the bank would not take undue risks on their own; but we have demonstrated that the Government is not prepared to see a bank of any size fail in the sense of actually having the bank be liquidated rather than assumed. The distortion which that guarantee produces is one that could well call for some kind of control over asset-capital ratios or liability-capital ratios and we do not now have such formal controls.

Finally, on the question of what happens to both the asset and liability side of banking system balance sheets, we can look at the whole history of monetary development in the United States in effect as one in which the attempt to restraint the money stock always led to the development of money substitutes. We can trace this development through the banknote period and the greenback period, all the way up to the evolution of demand deposits, credit cards, and revolving credits. I don't think we can ever get away from this sort of thing. The policy implication is not to play King Canute and hope it will stop but rather to be aware that it has happened before and will happen again, to watch out for shifts in financial structure as they occur, and not to cling too hard to any simplistic rule that will work if and only if no change in the structure happens.

Representative BOLLING. One of the things I do as a relatively unsophisticated person in this area is about once every year or two I get somebody to pull together the contingent liabilities of the Federal Government, all of them, in housing, in agriculture, and on and on and on.

Every time that happens, whoever has the duty of digging it all up for me is surprised at how large it is. I would like to raise a sort of nasty question. We have a system which is described by some as fragile, which in one aspect or another worries us in one way or another. Some of us worry about employment more than inflation and some of us worry about inflation. Some of us worry about both of them,

actually. But this is the most powerful economy in the world. as I understand it.

Is it possible that under certain foreseeable, conceivable circumstances that we would have a financial collapse that would not be a private sector collapse, but a Federal Government collapse.

Is anyone prepared to think about that, or is that not a question that should be asked, even at meetings such as this?

It should not be?

Mr. OLSEN. No, I don't say it shouldn't be, but I cannot conceive of any situation in which the Federal Government would be unable, for example, either to redeem its debts or issue new debt.

Representative BOLLING. Isn't there a point—and again, I am not ashamed to allow my ignorance to show—at which the enormous capacity of the Federal Government would be very much strained, if, for example, it were possible to look around the country and say. we are going to have to bail out—and I am for bailing out New York City, and was from the outset, not only New York, but a couple of other large ones, and about 150 counties.

Are there not circumstances in which the contingent liability situation, and the implicit liability we assume would make it essential for us to really print the rate that would be frightening in terms of its impact on inflation?

I am not a conservative. I am supposed to be a liberal, and I think I am. It seems to me to be realistic. I thought that a loud alarm bell went off when the political situation, plus the economic situation, destroyed our great cities financially.

Mr. OLSEN. I have a number of things I want to respond to. I know that Prof. Minsky is itching to answer that.

Let me say that the question of whether the economy or markets are fragile is a relative matter. It is very difficult to define.

We have had a number of cases of financial mismanagement, of which New York City is one. New York City is not a victim of the economy as much as it is a victim of its own mismanagement.

Representative BOLLING. Could I interrupt you? I don't disagree with you, but is it not a fact that there was political mismanagement in the sense that New York City's policies were premised on the notion that there would always be relatively full employment?

Mr. OLSEN. I don't know for a fact that that was the major assumption in the financial management of New York City, and if it was, one would have to ask the question, why was New York City so unsuccessful, while some municipalities and cities were so successful in maintaining their financial integrity?

Most of them have access to the same information. I don't know that that really makes a difference.

Representative BOLLING. That is why I describe myself as a political economist. I don't think you can separate the two. I don't want to keep interrupting you.

Mr. OLSEN. While I am at the microphone, I want to say that the fact that Franklin National was not permitted to fail—remembering after all that it did fail—that this provided an implicit guarantee for bank management, and perhaps other financial managers, to be more free-wheeling in their decisionmaking is untrue. I can tell you from my vantage point that nothing of the sort exists.

Those who are entrusted with the management of commercial banks, and their financial assets, stand to suffer great loss, if they cause a failure.

There is a very great discipline on them that exists as a consequence of the Franklin National failure.

So I would not regard the management of the Franklin National case by the Federal Government as inflationary in the sense that it provides an atmosphere for commercial bank managers to be any less responsible. In fact, I would say quite to the contrary.

I only have to put that one point in.

Mr. MINSKY. First of all, Franklin National did fail. The equity owners did take a beating. There were losses.

What I am talking about is the validation of overseas deposits, how that affected an implicit underwriting by U.S. agencies of liabilities that were not underwritten by legislation at more than a $40,000 ceiling.

Also the fact that, in the Franklin National failure, all of the liabilities were validated by the Federal Reserve, even the liabilities that received a premium interest rate to compensate for greater risks.

There are some questions here. You in Congress validate debt by taxation. The ultimate ability to tax depends on the productive capacity of the county, and the fact that it is being used.

The example of Germany in 1920 showed you can have a flight from currency. In the current international dollar situation, you do have a change in the ratio of dollar assets and other denominated assets, which put pressure on the dollar.

You could have an international flight. So some of the bigger questions you ask, about the contingent debt liability of the Government, and the ability to function, depends on whether you believe that the political process of the United States will lead to the type of breakdown by our Government that characterized Germany's loss of the ability to govern.

I don't think that that is likely to occur in the near future, although it is something that we should be concerned about in our thinking. We should be concerned about conditions that lead to a breakdown of government and be concerned about it.

I am always curious that bankers want us to accept their longer term debt as part of their capital, but they will not accept that as a part of our capital.

They want their bank balance to be read in a different way than they read their customers' balance sheets.

It is what you can finance that determines what you can buy. The purchasing power in the market is determined by financing.

Most of us have to finance our purchases by our wages and salary receipts. It is the ability, for example, to finance purchases by a debt that makes investment by deficit units possible.

The use of debt to finance investment also breeds an inherent instability in the economy which we try to control, by controlling key institutions that go and merchandise debts.

The emphasis on banking is an emphasis on controlling some portions of aggregate demand. Those who make profits either by buying capital assets or by selling debt will try to get out from under these

controls. That is the game we play. They, who finance capital asset holdings and investment, tend to destabilize our economy.

Mr. FRIEDMAN. Let me respond, Mr. Chairman, to your question about whether one can conceive of the U.S. Government failing to deliver on some of its liabilities—including, as you mentioned, the contingent liabilities.

My answer is yes, that it is not only conceivable but highly plausible, but in a more subtle form than the one at which we have been looking so far. Let me offer the following contrast, because I think that your mentioning the contingent liabilities goes right to the heart of the matter. The current outstanding direct debt of the Federal Government, even if we include intermediation by the Federal Home Loan Bank Board, and by Fannie Mae, amounts to less than one-half of 1 year's gross national product; under $1 trillion in a $2 trillion economy. The actuarial value of the liabilities already accrued to date by the social security system, however, is $4½ to $6 trillion; that is to say, up to 3 years of the gross national product. It is also growing over time. There is also in this context a potential political problem associated with the shifting age structure of the population.

While I cannot imagine the U.S. Government failing to deliver when a Treasury bill or note is due, I can indeed imagine a more subtle form of default in which, in one way or another, people of my age—who have some decades yet before receiving their first social security checks—will not receive what we have been promised when the time comes. I would regard that eventuality as falling right within the question you asked about the failure of the Government to deliver on its contingent liabilities.

Mr. OLSEN. I will take up the last point that Professor Friedman just made. I would agree with him—and I meant to make this point earlier in response to your question. You could have such a breakdown, or essentially, you could have very serious problems where the financing requirements of the Federal Reserve to meet its contingent liability is so large as to represent a very substantial portion of the total amount of funds raised in the credit market.

That is over the long run. We do live over the long run with the potential threat of that. In fact, currently, the size of the Federal deficit, as we would put it at this stage of the recovery, will make a larger claim on the total amount of funds raised in the credit market than we have ever experienced in any part since World War II's recovery from recession.

Because a large proportion of that arising out of what is called uncontrollable or noncontrollable expenditures by the Federal Government, it is a source of concern.

If you project this farther into the future, where, as Professor Friedman indicates, the need to tax in order to try to meet such a contingent liability under the social security system, in other words, the Federal Government would preempt a substantial portion of the market, you do have a very serious problem. The Federal Reserve, however, would become much more expansionary to meet the Treasury's needs thereby causing more inflation and higher nominal interest rates.

I wanted to come back to a point Professor Minsky made about controls, credit controls, particularly on commercial banks. If it is assumed that such controls will result in less inflation, and if one

assumes that in fact it is one of the major answers to the problem of inflation, then we could look around the world at the countries which have such credit-control devices, and see what their experiences are. You will see that there is no correlation between the application of such credit controls and inflation.

What you will find is, there is a very close correlation between the rate of growth of money, the monetary policies of individual countries, and the rate of inflation.

This brings me to a third point I wanted to make, because of one of the hypotheses that many economists hold, and which Professor Minsky espoused this morning.

There are those who maintain the economy is inherently unstable, and go further and insist that the Federal Government must engage in compensatory policies that try to limit the degree of instability that will occur in the economy. In my view, it is from this kind of reasoning that our problems arise, because the Federal Government in its monetary and fiscal policies, engage in compensatory policies with relatively poor forecasting capabilities. To the degree that they can accelerate or enlarge those compensatory policies with an expansionary monetary policy, for example, they overshoot and put in motion a wave of inflation, a portion of which becomes embedded in the economy as we move into the next wave of inflation.

When we look back historically, we find we have gone through these cycles in which we come out with a higher rate of inflation than at a comparable stage of the previous cycle. That is the present case. The private sector response to monetary and fiscal policies, and not the other way around.

The financial institutions in the private sector of the economy are at the receiving end of monetary and fiscal policies, and again, not the other way around.

Representative BOLLING. My experience may have been a little bit different after 30 years in the Congress. I would have suspected that it came out much more nearly even, even as to which came first.

The political process at least is as intricate as the economic process; perhaps more. But so did the reverse turn out to be true. I want to open it up to my associate on this side of the table, and see if he would like to get into this in perhaps a more erudite way.

Mr. HENDERSON. I would like to ask Professor Friedman to expand on his conclusion. As I heard him, he had not five propositions, but also a sixth: Cost expectations matter.

Given the general agreement about the difficulty of dealing with inflation, and the necessity of showing progress, do you perceive that public expectations can be altered by many years of persistent inflation, and what do you think will be the response of the public might be to seeing not 5 years, not 10 years, but perhaps 20 years of inflation?

You spoke also of the change in the contingent liability of the Federal Government. What if the public perceives that?

Mr. FRIEDMAN. The role of expectations is fairly important, and there are times when expectations can change very rapidly. Sometimes, however, they change only slowly. For example, one often hears criticisms that this country is going the route of people seeking immediate gratification, with everyone just concerned with the present and no one willing to deter satisfaction. We have now had more

than a decade in which it has been legislatively prohibited for small savers to earn a positive return on their savings, either before or much less after taxes. Hence the background of people's being more interested in current gratification is a decade of their facing the choice of consuming more now versus less later, rather than the other way around. Maybe one decade is enough to make a dent in people's response patterns. Two decades would make more of a dent. Without suggesting that all social behavior is due to economic conditions, which I do not believe, I do think that the kinds of economic patterns we will see if we continue to prohibit small savers from earning a positive return will be quite profound.

What I had in mind, however, was something quite different. Here I go back to Mr. Olsen's question of who is responding to whom. I would describe the pattern of U.S. monetary policy in the last generation as one of a stable background of accommodation punctuated by occasional sharp episodes of panic. It is during those episodes of panic, which stand out in one's memory, that it appears that the credit market responds to monetary policies. During the background period, it is somewhat the other way around.

What I had in mind was simply this: Suppose that we do undertake a policy geared at getting ourselves out of the inflation problem, and suppose that we have a recession of some magnitude in 1979. I am certainly not advocating that posture, but suppose that we wind up concluding that nothing else will do, and we do have a recession in 1979. If people's view is that, at the first sight of unemployment above 8 percent, we will immediately reverse policies, then that recession will have little chance of helping the inflation picture, and could well aggravate it. Alternatively, whether it is through the kinds of voluntary programs that Barry Bosworth is talking about, or through that tax proposals of Henry Wallich and Sidney Weintraub, or through aggregate policies, a public perception that the will to fight inflation is there is an important part of the process.

You also had a second question which I missed.

Mr. HENDERSON. I mentioned the contingent liability of the Federal Government as something that might affect the perceptions of the public, if they became aware of the situation.

Mr. FRIEDMAN. That is part of it as well. To go back to the social security system, we know that the liabilities of the social security system are absolutely overwhelming in the long term. We have also recently had one experience in which we realized the political response to increasing payroll taxes. What are we supposed to think that people will assume as they not only become more aware of social security system liabilities but also come to learn how the working public feels about the payroll taxes going up?

Representative BOLLING. I hesitate to say this in the presence of my distinguished colleague and vice chairman of this committee, who is a member of the Finance Commitee, but I would have to say that I have gotten a very mixed message, both from the Congress and the public, with regard to the social security matter.

I have not found it as simple as some to say that the Congress was all wrong, or as easy as others, to say that we must do something about it this year.

But there has been a reaction at both ends of the Hill, and at both ends of the process on social security. I suspect it is a rather usual reaction in the sense that Wattenberg concluded in his book "The Real Majority," saying, "Thank God for the American people and their self-interest."

Senator BENTSEN. I certainly would concur with you about the mixed reaction. That is certainly true on the Finance Committee, and the Ways and Means Committee, and to some extent, on the floor.

In turn, I think they are reacting to the public. I personally have not seen as profound a reaction from the public as apparently some of my colleagues have. It has been more of a despair.

Representative BOLLING. I would like to hear from our chief economist on the commitee, Mr. Dernburg, because the committee did, I think, in its annual report, take a rather clear position on the effect of those social security taxes on the current economic situation.

I think it would be useful to the whole discussion to get into that aspect of it.

Mr. DERNBURG. Do you have a specific question, Mr. Chairman?

Representative BOLLING. I was just thinking of our recommendations, which I supported, with regard to the modifications, and the type of modifications, of the social security changes that we made, and what I think the idea was, a particular form of tax treatment was going to increase inflation.

Mr. DERNBURG. That is certainly true of the employer portion of the tax. There has been a feeling that the employer portion adds to labor cost, and that that gets pushed on to higher prices, and therefore, you have additional inflation. This reduces consumer real income and therefore also tends to slow the growth of production and employment. That, of course, is a particularly unfortunate thing to have happen under present circumstances, because many economists now believe that the economy is heading for a slowdown and at the same time the inflation rate seems to be accelerating.

If we add new social security taxes on top of that, then we will add to the stagflation that we are all concerned about.

Representative BOLLING. It is an illustration of the problem of the dog chasing its tail.

Senator Bentsen, would you like to get in on this? We have had a very stimulating discussion, and one of the things that interested me was when I asked the question as to whether we could go so far as to destroy the U.S. economy, people up to that point had pretty much disagreed on specifics, suddenly came together, and I think decided that it was unlikely but possible.

Senator BENTSEN. Let me try to get up to speed. I just came down from the Finance Committee on a much more immediate problem.

But one of the things I would like to ask concerns the problem of trying to determine the long-range effects of monetary policy, and when do you finally get a reaction?

Are we ever going to have a time when the Federal Reserve can do a more effective job of bringing about a pragmatic result? Are there tools the Fed can use?

It seems to me from the report I get from economists, it is very difficult for them to give you a time frame of results of monetary policy.

Could you comment on that, Mr. Friedman?

Representative BOLLING. There was some discussion of that, and I hope the people who spoke most specifically can comment again.

Senator BENTSEN. That is the danger of a fellow coming in late.

Representative BOLLING. It will not be a repetition.

Mr. FRIEDMAN. Senator, if the question is, Can monetary policy, unaided, bring a halt to the current inflation? I would say the answer is yes. It would, however, be a process with which, as you said, we cannot associate any definite time frame. As important as the absence of a time frame, however, it is impossible to assess the economic costs of the cure, and whether the cure on balance is worth having. I think the policy implication is that we should certainly use monetary policy as a part, but only as a part, of an anti-inflation program, and that we should proceed with other policy tools including fiscal policy, tax incentives to increase productivity and to undertake capital formation, and perhaps other aspects of what the Council on Wage and Price Stability is doing, and maybe the Wallich-Weintraub tax proposal.

All of these policy tools are useful in addition to monetary policy—not because monetary policy cannot do the job alone, but because, if monetary policy does the job alone, the cost to the economy would be quite overwhelming.

Representative BOLLING. You mean the cost of unemployment?

Mr. FRIEDMAN. Yes, sir, I do. The degree and duration of economic slack that would be necessary to get out of the 7-percent ongoing inflation that has built up during nearly a decade would be severe. It took a long time to break the back of the price stability that we had, and now it will take a long time to get it back.

Representative BOLLING. That amounts to saying that while the Feds surely could do it with monetary policy, if it did, the costs would be so high in unemployment that it be more disadvantageous if it did not.

What we have to devise is a set of techniques that are broader based than simply the old reliance back and forth on an emphasis on doing something about unemployment, and then an emphasis on doing something about inflation; and cycling back and forth within a relatively narrow limit of change.

Is that a fair statement?

Mr. FRIEDMAN. Yes, sir, it is.

Senator BENTSEN. My concern is the sophistication of tools we use in monetary policy, and trying to coordinate them with our other efforts.

I am on the Finance Committee. We have tried to do something from the tax side. I sit on the Public Works Committee, and I know how long it takes to get public works programs.

Sometimes I get the feeling that we are working at cross purposes. About the time that one policy takes effect, the other one comes in at a much later date. The problem may already be solved, but we cannot turn the unneeded policy off fast enough.

Mr. FRIEDMAN. Senator, I think that there are available a number of policy proposals which would indeed have the effect of making monetary policy more efficient in doing job.

For example, we could equalize the reserve requirements on various kinds of bank liabilities. The slippage between member and nonmember banks is something else that the Federal Reserve complains

about all the time. Also, we could get rid of the regulation Q ceiling on thrift deposits. These are just three examples of things we could do to help monetary policy do its job better.

Mr. OLSEN. I would like to respond to your question, Senator, by going back just for a moment to an earlier question about the expectation of the marketplace.

A hypothesis has been developed in recent years that the marketplace anticipates the policies of Government, and the effects of those policies, and moves rapidly as a consequence.

For example, someone observing monetary policy as suddenly becoming more expansive, anticipating the inflation effects of that in their investment decisions.

That is just an illustration. You can go to more pervasive illustrations. Within those pervasive expectations is that, will the Federal Reserve accommodate or finance the cost increasing decisions that are made by both Government and the private areas?

Will the social security tax increase as it moves through the economy, and in effect, financed by the Federal Reserve policy, so that its effects in causing an increased rise in prices and a possible consequent reduction in real output, will that be neutralized by the Federal Reserve, and sufficiently expansive, or somewhat more expansive?

There is a prevailing view, and particularly right now, that indeed monetary policy will be that accommodating.

One of the problems that I have with the proposition that monetary policy can do it alone is that it often leads to the conclusion that monetary policy should not do anything. That is very difficult.

In other words, how should monetary policy begin to snuggle up? If the Council on Price and Wage Stability is successful in reducing inflation for a 6-month period of time, could the Federal Reserve reduce nominal GNP rapidly enough so as to prevent that slowdown from simply causing real output to surge ahead for a short period of time and then aggregate demand, in which inflation would never overcome the direct intervention efforts of Mr. Bosworth and Mr. Strauss?

That requires a very nimble effort on the part of the Federal Reserve.

In one of my criticisms of the Federal Reserve, I say that they are not sufficiently explicit with regard to their own policy intentions and their own policy goals. Right now we have a bit of confusion between the Federal Reserve economic forecasts.

Senator BENTSEN. Is your reason that we do not get immediate enough reaction by participation?

Mr. OLSEN. Yes. If the Federal Reserve were more explicit, that it will not underwrite at the same time that the Council on Wage and Price Stability is seeking to obtain at best a short-run reduction, the policy combination might be far more successful.

But here you have a Council on Price and Wage Stability trying to talk down prices and wages. Then you have another segment watching the Federal Reserve, and you see them trying to expand, and they say, what really counts is what the Federal Reserve is doing; that is what will quell the inflation.

They act accordingly. You develop this implicit assumption that in fact monetary policy will be so accommodative to accommodate the

inflation decisions that are being made in many areas of the economy.

I could be more specific with regard to some of the policy tools that the Federal Reserve employes as well. Currently there is a perception on the part of some that the Federal Reserve employs as well. Currently there is a perception on the part of some that the Federal Reserve has moved toward greater restraint. Indeed, that requires some definition.

Actually the monetary base, which we call high-powered money, has shown no signs of slowing down over the last 2 or 3 months. In fact, there has been a slight acceleration, even as interest rates increase, and the Federal Reserve's Federal funds target has been dropped.

So in the sense that monetary aggregates are the important determination of the rate of increase in economic growth and activities, the Federal Reserve has not tightened up significantly. It has increased its Federal fund rate that has application to the market increase that has been occurring.

The rise in the market interest rate is the result of the Federal Reserve policies last year and the year before. The interest rates are moving toward what we call an equilibrium level. With inflation running at 6 to 7 percent such an equilibrium rate would be somewhere between 8½ and 9 percent. That would not be an extraordinarily high interest rate, given that kind of inflation.

Mr. MINSKY. I find that some of the things that have been said recently have to be corrected. Prices go up when demand exceeds supply. The interest rates go up when the demand for financing increases.

The rise in interest rates has been due to an expansion in the economy, and the feedback of that to the demand of financing. Which came first is the problem. Getting back to Senator Bentsen's question, first of all, there are no sets of dials that can be set to fine tune our economy. People have oversold you on what can be expected through monetary policy.

A complex, convoluted financial system means that there are many organizations around who will try to get around, in their financing, what the Federal Reserve tries to restrain by the weak weapons the Federal Reserve has.

The internal workings of an economy make fine tuning an impossible goal. Anytime you get a printout or a forecast, such as you get from the Council of Economic Advisers on occasion, which shows you a 4-year path of decreasing inflation and decreasing unemployment rates, remember that such fine tuning is impossible and the forecast is not worth the paper it is printed on.

The economy has internal destabilizing forces, which have to be taken into account.

One of the cliches that is associated with my work is that stability is destabilizing. That does not mean that we cannot do better.

But doing better will involve structural reform; that is, whereas all free enterprise systems are unstable, some are more unstable than others. We have developed a policy strategy with an upward bias in prices and threats of periodic depressions.

One of the structural reforms that will have to be undertaken is a reform of social secruity, which was implicit in Mr. Friedman's earlier remarks. That is, there are limits on how much you can transfer from the active members of the labor force to the inactive members of

the labor force by the Government. At some point, quite clearly, transfer payments become inflationary, particularly when they mean a substantial decline in the amount of take-home pay for other workers. When this happens you get upward pressure on wages from the labor forces.

I don't think we can put much hope in the transfer payment system. I would suggest that the entire transfer payment system should be looked at as a whole, and that one of the longer range projects of the Joint Economic Committee might be a reexamination of the entire transfer payment system.

This includes the problem, I would say, of indexing; part of the inflation problem is, last year's inflation is built into next year's social security payments, which makes getting out from an inflation very difficult indeed.

I think only if you are aware of the imperfections and the limitations can you have effective policy. If you believe that the system settles down into some state of bliss if you only got the throttles right, you will not have effective policy; the system does not work that way.

Senator BENTSEN. That is why I was expressing my frustration at the inability——

Mr. MINSKY. You are trying to manage a very complicated, difficult thing. I think you have been oversold on what can be done under our type of economy.

Senator BENTSEN. I don't think I have been oversold.

Mr. MINSKY. I am speaking of the collective you.

Mr. OLSEN. Senator, I just wanted to give a little anecdote in response to what Mr. Minsky said, suggesting that the economy is inherently unstable, and therefore, requires great control on the part of the Federal Government.

It is somewhat like the situation in which the Government throws a party to which the private sector has been invited, and the Government's bartender is spiking the punch without telling the private sector guests what he is doing. And as they become more intoxicated, the Government says, "Look how irresponsible they are! They are clearly not in control, and need to be restrained more."

Mr. MINSKY. The economy being inherently unstable does not imply greater control. It might imply that the degree of instability we have is a result of a very inadvertent set of structural characteristics.

There are many alternative types of free-enterprise systems. It does not mean you need more intervention in the society.

Mr. WALLACE. Mr. Friedman, you talked about the problem of using anti-inflation policies to an extent that might exacerbate unemployment.

At our hearings last Friday, Gardner Ackley, Jack Meyer, and Hendrick Houthakker also expressed a concern that they might be used to limit growth, or increase unemployment, in order to go further toward controlling inflation.

But this gets us to the question of the extent to which macropolicies can be used to promote high employment. Since enactment of the Employment Act of 1946, when we first committed the Government to promote job expansion, we have used macroeconomic policies for that purpose, monetary and fiscal policies primarily. But last week, committee witness Eli Ginzberg testified that since 1975 the economy

has produced 9 million new jobs. He also pointed out that of the some 6 million unemployed, about half fall into the unskilled teenage and youth category.

So my question is: Have we reached a point where we can no longer use macroeconomic policies to increase employment? To put it another way, can we use macroeconomic policies to decrease teenage unemployment?

Mr. FRIEDMAN. I think I agree with exactly the point you are making. Let me state it in this way: My perception is that we are either at, or just about at, the rate of unemployment beyond which we should not push using macropolicies; that is to say, we have lowered the unemployment rate from almost 9 percent 3 years ago to just about 6 percent today, and we have done so in the face of an historically unprecedented increase in the number of people in the labor force. We have done this using macropolicies alone, for all practical purposes.

I think that that is fine, and I have no objection to what we have done, but I would now be extremely reluctant to push the unemployment rate any lower by monetary or fiscal policies. What we now need to do is rely more on micro-oriented policies, to sustain the kind of capital formation which over a longer time-frame will create jobs. I am not a micro-labor-market economist, but I understand that there are various kinds of training programs and job placement programs that we could rely on.

If we choose to use monetary and fiscal policies to pursue, for example, the 4.9 percent which the Council of Economic Advisers now calls full employment, that policy would probably have extremely inflationary effects.

Mr. WALLACE. Mr. Olsen, would you comment?

Mr. OLSEN. Apart from saying I agree entirely with what Professor Friedman has said with regard to where we are at the present, the unemployment rate for skilled workers and adult males currently is at a level now suggesting a sufficient tightness in the economy, that the further use of macropolicies will not yield results.

I would make a comment, however, about the teenage unemployment. One is that I would restate what I have said a number of times in the past in the discussion of the minimum wage. An increase in the minimum wage does have an effect in slowing down job creation for teenagers with less skill.

Second, we seem to do an extremely poor job—and I would say, relative to some other countries—in making the transition from school to the labor force. We almost go out of our way in creating excessive barriers for young people trying to make that transition. We need badly to review that.

Mr. WALLACE. Would you agree that macroeconomic policies should not be used to cut unemployment further, but that we should have specific policies tailored for that purpose?

Mr. OLSEN. It would be counterproductive to use macropolicies.

Mr. MINSKY. I think we have reached a point of agreement. I think the transition from school to work for all those who do not have a master's degree in business or medical degree is very poorly managed indeed.

This is particularly true for the 16-, 17-, 18-year-olds who are not top students academically. I would suggest that the U.S. employment

service develop a technique for getting to this problem in the urban schools, so that job opportunities are filtered into the schools.

Macroeconomic tools will not solve all problems.

Senator BENTSEN. I think that might be a good point on which to close, reaching agreement.

We will stand in recess. This committee will meet again tomorrow at 10 a.m., in room S-207, the Capitol.

We are very pleased to have the contribution each of you gentlemen made this morning.

[Whereupon, at 12:05 p.m., the committee recessed, to reconvene at 10 a.m., Wednesday, June 21, 1978.]

SPECIAL STUDY ON ECONOMIC CHANGE

WEDNESDAY, JUNE 21, 1978

THE FIXED INVESTMENT DECISION

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room S-207, the Capitol, Hon. Richard Bolling (chairman of the committee) presiding.

Present: Representative Bolling and Senator Javits.

Committee staff present: John R. Stark, executive director; Louis C. Krauthoff II, assistant director; Lloyd C. Atkinson and Thomas F. Dernburg, professional staff members; Mark Borchelt, administrative assistant; and Charles H. Bradford and M. Catherine Miller, minority professional staff members.

Special Study on Economic Change staff present: Charles S. Sheldon II, research director; Robert Ash Wallace, research director; George D. Krumbhaar, Jr., counsel; Richard D. Bartel, staff economist; and Paula J. Dobriansky and A. A. "Chip" Sayers, research assistants.

Also present: John B. Henderson, Congressional Research Service, Library of Congress.

Mr. SHELDON [presiding]. The committee will come to order. We have a special situation this morning. Chairman Bolling has a crucial Rules Committee meeting on the House side related to the energy bill. A lot of people have a very large stake in that field, and he regrets not being able to be here as the meeting starts and his appearance later on will depend, of course, on what happens at the House Rules Committee.

I am to start things off this morning, and I can assure you that a number of the members will take a keen interest in the written record if they cannot be here for the proceedings this morning.

We have been having a series of these panel meetings, as all of you know, and the purpose, of course, is to have a discussion rather than to call upon a single witness to give his statement and then spend an indeterminant time cross-examining the witness. We will hear from all three of our invited guests and only after that make the rounds with questions. The questions will come from any of the members should they show—we hope they will—and from my colleagues on the staff, and I hope the three visiting panelists will feel free at the appropriate time to comment or question each other as things go on.

Something else the chairman has said in each of the opening remarks is that he hopes that participants will do the best they can to hold

their opening remarks down to the order of 10 or 15 minutes in order to give us a maximum amount of time for the discussion to follow. Not everyone has held to that completely, but it is sort of an honor system where we encourage people as much as possible to keep it brief because there will be an opportunity for the full prepared statement and any attachments that you think are important to be included in the record and they will then later appear in print. Of course, the record will be sent to you later for correction and comment.

We will start off this morning with Mr. Allen Sinai. Mr. Sinai is a graduate of the University of Michigan. He received his Ph. D. in economics at Northwestern University, taught at the University of Illinois, Massachusetts Institute of Technology, and Boston University. He has been a senior economist with Data Resources, Inc., since 1971. The DRI initials are well known, indeed, to the Joint Economic Committee.

Please proceed, Mr. Sinai.

STATEMENT OF ALLEN SINAI, VICE PRESIDENT AND SENIOR ECONOMIST, DATA RESOURCES, INC., LEXINGTON, MASS.

Mr. SINAI. Thank you very much, Mr. Sheldon. I thought I would deal in my comments with three areas related to the impact of inflation and business capital spending.

The first question that I would ask and attempt to answer is how does inflation impact on the capital spending of business. The second question I would ask and attempt to answer through the simulation of the DRI model is to what extent have the high rates of inflation during the past decade limited business capital formation. And the final question I would ask and attempt to answer is what policies could be followed to minimize the harmful effects of inflation on business fixed investment.

I think it is evident that we have had a very sluggish recovery in business fixed investment. During the current expansion it has been a cause for concern over the adequacy of capital formation, the impact on productivity, which has been very slow, and the potential consequences for inflation. So I do not think I will go over those facts.

Table 1 and charts 1 to 3 in the prepared statement show very clearly the weakness of business capital formation, both as a percent of GNP in the last few years and the weakness of business and capital spending related to other postwar expansions.

I would rather take a look at the causes. We might first look or turn to chart 4 in the prepared statement which gives one way of seeing how inflation affects business capital spending. Inflation affects the rate of return on capital, and in chart 4 we see a comparison between the after-tax rate of return on capital adjusted and unadjusted for inflation.

Mr. WALLACE. Could you wait, Mr. Sinai, so we will have something to refer to. Your prepared statement is being reproduced, and I would prefer to have references to a chart that I can see. They are coming now. Thank you.

Mr. SINAI. Has everyone got a copy of this or about to have a copy of this?

Mr. WALLACE. OK. Thank you very much.

Mr. Sinai. To see how inflation impacts on business fixed investment let us take two views of it. One is to simply look at the rate of return on capital, and that is what chart 4 shows. There we see the after-tax return on the capital stock of nonfinancial corporations, both unadjusted for inflation effects and also adjusted for inflation effects.

The solid line indicates the ratio of after-tax profits to the capital stock of nonfinancial corporations over the last 11 years. Looking at that indication of a return, one sees that it rises in the 1970's. However, when the profits of nonfinancial corporations are corrected for inventory capital gains and for the replacement costs of new investment for capital consumption, replacement costs, the resulting calculation of the rate of return on capital shows a different story. Indeed, it declines and drops sharply in the 1970's before recovering in 1975 and 1976.

The dotted line shows after-tax nonfinancial corporate profits plus the inventory adjustment allowance. As you know, the inventory valuation adjustment subtracts out. Since replacement must take place at new higher prices the capital consumption allowance adjustment also is a subtraction during an inflationary period since it is the difference between the estimated replacement cost of capital goods and the original cost used in accounting for tax purposes.

Coincidentally, with that declining inflation adjusted rate of return, the pace of business fixed investment slackened in some of the years of the 1970's; in 4 of the 7 years between 1970 and 1977 there were declines in real capital spending. Thus, when full account is taken for the impacts of inflation on real corporate profits, the expected return on capital has very definitely declined, has been weaker.

Another way to analyze the impacts of inflation on business capital spending is through a structural econometric model of business fixed investment. In the DRI model the explanatory framework for business fixed investment disaggregates business fixed investment into real spending on plant and equipment. The approach to modeling both decisions is similar and involves a generalization of the Jorgenson neoclassical approach to business capital formation. Briefly, the DRI model investment equations extend the Jorgenson framework in several ways. The effects of pollution abatement equipment requirements are explicitly recognized in the accelerator or final sales measure of output. The endogenously determined financial position of nonfinancial corporations affects the pace of investment through changes in business cash flow and financial risk as measured by a debt service burden variable. The cost of financial capital in the Jorgenson-Coen definition of rental price reflects realistic after-tax corporate financing parameters, including the cost of equity financing. Utilization rates, at less than full capacity, impact on replacement investment. Finally, expectations of sales are compared to actual sales in measure of disappointment.

The inflation effects on busines fixed investment operate through each of these factors and others based on the Jorgenson approach. Let me try to summarize those briefly with a few catchall words:

First, the accelerator, expectations of final sales corrected for spending on pollution and abatement equipment.

Second, the profit margin. It is the ratio of product price to the effective cost of capital goods.

A third factor is interest rates, both short- and long-term through the debt service burden, the ratio of interest charges on outstanding debt to business cash flow and the cost of financial capital, both debt and equity. It is an element in the effective cost of capital goods.

The fourth factor is business liquidity, measured by the cash flow of nonfinancial corporations, adjusted for inventory valuation but not for the replacement costs of depreciation.

A fifth factor is the stock market. Stock market performance affects business capital spending through changing the cost of financing, because corporations have to finance or will finance some of their capital expenditures with equity issues.

A sixth factor is the outstanding indebtedness of nonfinancial corporations; outstanding bank loans, commercial paper and mortgage and bond debt affect the debt service burden.

Finally, capacity utilization; increased utilization of the existing capital stock requires a greater rate of replacement investment.

These represent a framework of factors, seven factors, that in the econometric model explain business fixed investment. How does inflation work through these factors to reduce business fixed investment?

First, higher inflation causes slower real economic growth. This affects expectations of final business sales and through the accelerator limits business capital spending.

Second, a more rapid rate of inflation reduces the profit margin, the ratio of produce price to the effective cost of capital.

The combination of a higher supply price of capital goods, increased nominal costs of financing capital expenditures and a lower present value for the tax deductible depreciation expenses causes the effective cost of capital goods to grow more rapidly than business can increase product prices. This lower marginal return on new capital goods negatively affects business fixed investment.

Third, higher inflation raises both short-term and long-term interest rates. Bond yields rise through the effect of inflation on the premium demanded by investors for supplying savings. Eventually a sustained 1-percent rise of actual inflation is translated to a near 80 basis point increase in the nominal bond yield via the expected rate of inflation. Short-term interest rates rise through the increased pressure of nominal loan demands against the liquidity of the commercial banking system and weakened deposit inflows to nonbank financial intermediaries.

Rising interest rates impact on business fixed investment through higher nominal costs of external financing in the effective cost of capital goods, and by raising the debt service burden of nonfinancial corporations relative to cash flow. Further, the higher interest rates damage the stock market, causing a rise in the cost of equity financing.

Fourth, business profits and the cash flow available to finance capital outlays sharply diminish during periods of rapid inflation because of illusory inventory profits and the rising replacement costs for capital goods. Corporate profits are typically overstated during periods of inflation because of conventional inventory accounting methods and historical cost expensing for depreciation. After correction for these factors the cash flow for nonfinancial corporations is sharply reduced.

Fifth, higher inflation causes the nominal external financing requirements of business to grow and increases bank loan indebtedness,

commercial paper issues and the mortgage and bond financing necessary to finance desired capital outlays. This rising indebtedness raises the debt service burden to corporations and eventually restrains spending through the increased financial risk of corporate balance sheets.

Finally, an autonomous acceleration of inflation can cause reductions in capacity utilization by diminishing aggregate demand. Reducing the intensity of use of existing capital lowers replacement investment.

Now, these factors and the effects of inflation make for sizable reductions in the rate of business capital formation during periods of rapidly rising prices. To these influences that I have mentioned must be added the potential restraining effects on aggregate demand from tighter fiscal and monetary policies. The effects of restrictive policies on expected sales can be quite substantial and sharply diminish the planned rate of capital outlays by business.

These are the factors, and I have tried to explain to you some of how inflation works through the factors to affect the rate of fixed investment.

In order to assess how much of an effect these factors can have, we took the DRI model of the U.S. economy and simulated over the 1966 to 1976 period under the assumption of an autonomous reduction in wages. If you reduce the rate of growth of wages, there is a rather quick and substantial effect on prices, since wage costs are a very large part of what businesses pass on in their final prices. The simulation is meant to be illustrative of the effects on business fixed investment from an autonomous reduction in inflation. The choice of wages as the lever for inflation was made simply for convenience, although it is certainly true that the wage impacts on inflation are quite considerable. However, numerous other means of reducing inflation could have been selected, including autonomous reductions in energy prices, food inflation, basic materials commodity costs, or several others.

Autonomous reduction in wages would be one way to limit inflation, and as you will see, would help business capital formation quite a bit.

The lower inflation scenario for our purposes today can be seen in table 2 of the prepared statement. The baseline simulation referred to is a full dynamic historical solution of the model from 1966 to 1976, which tracks the actual data exceptionally closely. It is almost, not quite, but almost replicating what the historical numbers were for the variables.

What you see in the table are the differences in the average of each of some key variables in the baseline and in the scenario where wages are lower autonomously. If we look at the inflation part, you see in the baseline the average rate of wage growth was 6.8 percent and in the lower inflation scenario the autonomous reduction effected was 2.7 percent. So it is a rather large reduction in wage inflation. The effect on prices was to lower the GNP deflator by the answer induced and brings about an improvement in productivity because of higher inflation, and so the produce price inflation does not have to drop by as much as the wage inflation goes down.

The effects of the autonomous reduction of inflation can be seen to be quite beneficial to the economy. While offering support for the view that accelerated inflation can be a cause of recession, the quali-

fication to this conclusion is, however, that the reduction of inflation must be autonomous. If tighter fiscal and monetary policies are used to restrain the inflation, the economy will not benefit as in the case of an autonomous shock to reduce the inflation.

Similarly, the most damaging impacts on the economy arise from exogenous shocks that raise inflation, such as the OPEC quadrupling of prices in 1973–74, a commodity price explosion from shortages of food and fuel, increases in minimum wages or social security taxes, or inflation because of depreciation in the dollar.

The autonomous reduction in wages and prices in the lower inflation scenario gives us a 3.4-percent average growth of real GNP over the 11 years, some 0.5 percent higher than in the baseline. The unemployment rate averages 3.5 percent, so that the lessened inflation brings about lower unemployment.

The major strength occurs in the interest sensitive areas of the economy. In particular, real business fixed investment averaged $137.2 billion over 1966 to 1976 in the lower inflation simulation, compared to the $115.8 billion of the baseline. Housing starts averaged near 2.2 million units, about 640,000 units higher than in the baseline.

Interest rates were considerably lower, with the Federal funds rate some 80 points below the baseline solution and the yield on new issues of top-quality corporate bonds only 6.3 percent over the period, compared with the 7.6 percent in the baseline simulation.

Nonfinancial corporate profits were considerably higher, especially after adjustment for inflation. The debt burden of nonfinancial corporations never reaches the peaks recorded in the baseline that were associated with the credit crunches of 1966, 1969 to 1973, and 1973 and 1974.

The ratio of business fixed investment to gross national product adjusted for pollution abatement expenditures averages almost 11.5 percent over the period instead of the 10 percent of the baseline solution.

For a quick summary of what happened and why, let us look at charts 5 to 22. The pictures simplify matters and give us almost an instantaneous look at what happened.

The first few show the impact on the economy of inflation and inflation expectations from the lower inflation scenario. The dotted line in the charts reflects the lower inflation scenario. The solid line is the baseline for the variable indicator, and you can see easily that real GNP is considerably higher over the period than rates of inflation. The GNP deflator is lower except in 1974, because so much of the inflation was from outside. You can see that the unemployment rate is much lower than the expected rate of inflation in charts 6 and 7. Chart 8, capacity utilization is much lower. The effects on business fixed investment are very pronounced in chart 9. Overall business fixed investment shows a much higher pattern of performance and a lower inflation scenario than in the baseline scenario on both equipment and structures. Charts 10 and 11 show a very strong performance.

The real fixed investment as a percentage of real GNP in chart 12 is much higher and, indeed, is rising in the 1970's rather than lowering and falling in the 1970's. That ratio that the administration would like to see at 12 percent is actually achieved under the lower inflation scenario.

The causes of the better investments are indicated in charts 13 to 20. In chart 14 you see the pattern for real final sales. With the accelerator effect it is much higher. Charts 14 and 15, the profit margin factor that I have mentioned, the ratio of output price to rental price for both equipment and structures is higher. It is more striking in the case of structures than in equipment.

In chart 16, the debt burden ratio, another influence on business fixed investment, is much lower that what actually happened in the baseline, and indeed, we do not see the sharp rises to peaks such as comparing the rise in 1973 and 1974 in that credit crunch.

Interest rates are lower in charts 17 and 18, and if you prefer to look at this in terms of rate of return on capital, in charts 21 and 22 the aftertax return on capital unadjusted in chart 21 and adjusted for inflation in chart 22 shows a much better performance under the lower inflation scenario.

Where does this illustrative example lead me to in terms of prescriptions for policy? There are three areas of policy on which some suggestions could be made, and I might say that the simulation convinced me along with the other work that I have been doing over the last 4 or 5 years, it really underscores the importance of coming to grips with the inflation problem. At the same time, it must be recognized that methods for autonomous reductions of inflation would benefit the economy much more than reductions of inflation induced by restrictive stabilization policies. Thus, any measures which serve to reduce wage increases and price rises, besides restrictive policy medicine, would be beneficial. That is easy to say and, of course, hard to do.

But it is true that the administration has implicitly recognized this through the jawboning of deceleration that began a couple months ago. Chipping away at wage and price inflation through acceptance of reduced salary increases, increased beef import quota, additional supplies of lumber, marginal reductions in product price increases relative to previous years, will all serve to stimulate aggregate demand, real output, employment, and eventually business capital spending. Removing barriers to competition, the regulations that prop costs and prices, restraining floors on wages and farm prices, establishing monitoring systems to prevent bottlenecks and shortages from arising in particular industries, establishing an energy program of self-sufficiency to protect us against OPEC price shocks, maintaining buffer stocks of basic commodities and strategic materials, would all fall within the domain of autonomous changes in the structure of inflation and be beneficial according to this work.

However, the problem is that these measures together can probably account for no more than a percent or so in the existing inflation. They kind of chip away at the edge.

The most promising alternative policy to effect a more significant autonomous reduction in wages is the tax-income-based program—TIP—the tax income policy based program suggested by Henry Wallich, Sidney Weintraub, and Arthur Okun. That particular approach is the most promising way to do something about wages. In particular, the payment of subsidies to employees for voluntarily reducing wage demands would provide a large bang for a buck of lost tax revenue. Lower wage costs have a highly levered impact on inflation; hence on

the performance of the economy and the pace of business capital spending.

The carrot approach of rewarding reductions in wages through tax credits would be preferable to the stick approach where tax penalties are levied on employers who accede to high wage demands. In the latter case, these costs get passed on anyway. In the former case, autonomous reductions in wages would lead to increased economic output and the effects similar to those simulated in the lower inflation scenario. The tax revenues gained from the stronger economy would likely offset the loss through subsidies to employees.

Therefore, instead of offering $15 billion of personal income tax reductions in 1979, the administration ought to tie these payments to households to a deceleration in wages over next year. We should try to look for, and I would suggest as a matter of policy, look for other ways to accomplish similar reductions, such as tax credits to employees in industries with above-average rates. Such an approach would be highly beneficial to the economy, business fixed investment, productivity, and eventually inflation.

A second set of policies can be used to increase business capital formation, even with the high inflation of the U.S. economy. I have written about this a lot before, and we will simply say that in our research the ones most helpful would be tying depreciation somehow to inflation, some sort of replacement cost proxy, to get the allowable depreciation cost for taxes for business closer to what they are really paying in the way of inflation.

The second kind of incentive would be investment tax credits. The administration's proposal currently stresses reduction in corporate profit taxes, but it is the least, probably, strong tax method for increasing capital formation. It leaves it at the discretion of the firm as to how to spend the funds, and not necessarily on capital. In the case of the tax incentive, cost depreciation, or some indexation could be used to tie depreciation expenses to inflation, more nearly bringing depreciation expensing in line with inflation costs.

Then the final one, the policy approach which can stimulate business capital formation, although not come to grips with the inflation problem except only gradually, is one that I have previously called the tight fiscal-easier money approach. All that means is slowed growth in Government expenditures, not a reduction of expenditures by the Government.

The easier money component of a tight fiscal-easier money policy also does not refer to a radically extreme measure. By easier money is meant a Federal Reserve policy that permits money growth between 7½ and 8 percent per annum in recognition of the difficulty in reducing the 5- to 6-percent core inflation of the U.S. economy.

This policy, which I have analyzed in a couple other papers, tight fiscal-easier money, neutralized each other in effect on inflation, but have an important psychological effect of benefiting capital formation because of the lower interest rate environment. So capital formation is higher, productivity is higher, and you get some positive effects of inflation on that.

I note that this kind of policy seems to be the message of the recent Federal Reserve Chairman Miller. For one reason or another there is a rather tight approach to fiscal policy coming from both the adminis-

tration and Congress, and we seem to be headed in the right direction on this score.

Thank you.

[The prepared statement of Mr. Sinai follows:]

PREPARED STATEMENT OF ALLEN SINAI*

Inflation and Business Capital Spending

I. INTRODUCTION

The sluggish recovery of business fixed investment during the current expansion has been a cause for concern over the adequacy of capital formation, productivity growth, and the potential for inflation. Without sufficient business fixed investment, the productive capacity necessary to prevent a recurrence of the shortages that characterized the economy in 1973 and 1974 might not be forthcoming, rises in the productivity of labor and growth and potential output would be limited, and whatever inflation was in process would be exacerbated. A worsened inflation would prove damaging to the economy's performance, induce restrictive monetary and fiscal policies, and raise unemployment. Worst of all, there is no assurance that a recessed economy would limit the inflation sufficiently, as evidenced by the accelerating pace of inflation during the recessions since 1957.

Indeed, the rate of business capital formation has been quite weak since the March 1975 recession trough. The ratio of business fixed investment to GNP has been low and the upswing in real business capital spending anemic compared to other expansions (Table 1, Charts 1 to 3). The only other years when the proportion of business fixed investment to GNP has been as low or lower were 1930 to 1946, 1952 to 1954, and 1958 to 1964.

TABLE 1.—BUSINESS FIXED INVESTMENT: HISTORICAL PROFILE AND DRI PROJECTIONS[1]

	IFIXNR/GNP	(IFIXNR-PABE)/GNP	IFIXNR72/GNP72	(IFIXNR72-PABE)/GNP72
1953	9.4	9.4	9.0	9.0
1954	9.3	9.3	9.0	9.0
1955	9.6	9.6	9.4	9.4
1956	10.4	10.4	9.8	9.8
1957	10.5	10.5	9.7	9.7
1958	9.3	9.3	8.7	8.7
1959	9.3	9.3	8.7	8.7
1960	9.4	9.4	9.0	9.0
1961	9.0	9.0	8.7	8.7
1962	9.1	9.1	8.9	8.9
1963	9.0	9.0	8.9	8.9
1964	9.4	9.4	9.3	9.3
1965	10.4	10.4	10.3	10.3
1966	10.8	10.8	10.8	10.8
1967	10.3	10.2	10.3	10.2
1968	10.3	10.2	10.3	10.2
1969	10.6	10.4	10.6	10.5
1970	10.2	10.0	10.2	10.0
1971	9.8	9.5	9.7	9.5
1972	10.0	9.6	10.0	9.6
1973	10.4	10.0	10.6	10.2
1974	10.7	10.3	10.7	10.3
1975	9.8	9.3	9.4	8.8
1976	9.5	9.1	9.2	8.6
1977	9.8	9.4	9.5	8.9
1978	10.1	9.7	9.7	9.1
1979	10.3	9.9	9.9	9.2
1980	10.3	9.9	10.0	9.3
1981	10.5	10.1	10.1	9.3
1982	10.4	10.0	10.0	9.2
1983	10.4	9.9	9.9	9.1
1984	10.6	10.1	10.0	9.2
1985	10.9	10.4	10.3	9.3

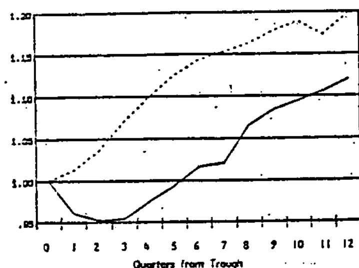
[1] 1978–80 forecast from DRI Control 6/24/78; 1981–85 figures from long-run projections of Summer 1978.

Sources: Department of Commerce, Bureau of Economic Analysis, Data Resources, Inc.

GNP—Gross national product.
GNP72—Gross national product in constant dollars.
IFIXNR—Fixed private nonresidential investment.
IFIXNR72—Fixed private nonresidential investment in constant dollars.
PABE—Pollution abatement expenditures by U.S. business on capital account.

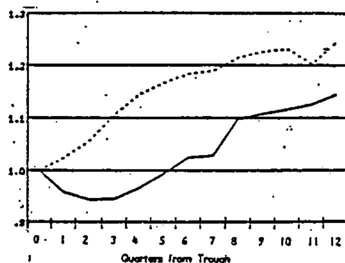
*I am indebted to Terry Glomski and Roberta Gerson of Data Resources for their assistance in the preparation of this statement.

CHART 1. Real Business Fixed Investment in Expansion (Trough Value = 1)



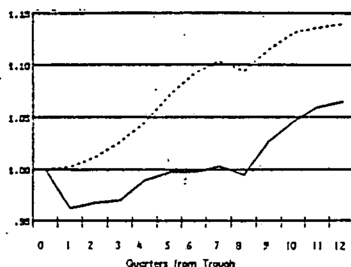
Current Expansion: 1975:2 to 1978:1
Average of Expansions: 1950:1 to 1952:4, 1954:3 to 1957:2, 1958:3 to 1961:2, 1961:2 to 1964:1, and 1971:1 to 1973:4.

CHART 2. Real Producers' Durable Equipment in Expansion (Trough Value = 1)



Current Expansion: 1975:2 to 1978:1
Average of Expansions: 1950:1 to 1952:4, 1954:3 to 1957:2, 1958:3 to 1961:2, 1961:2 to 1964:1, and 1971:1 to 1973:4.

CHART 3. Real Plant Expenditures in Expansion (Trough Value = 1)



Current Expansion: 1975:2 to 1978:1
Average of Expansions: 1950:1 to 1952:4, 1954:3 to 1957:2, 1958:3 to 1961:2, 1961:2 to 1964:1, and 1971:1 to 1973:4.

At the same time, the economy has experienced the greatest inflation during expansion in modern times and also exceptionally high interest rates. The implicit GNP deflator rose 9.6% in 1975, 5.3% in 1976, 5.5% during 1977, and is likely to rise near 7.1% this year. Long-term bond yields on AAA corporates have ranged between 8 and 9% for the past three years, compared to the average of 5.6% over 1955 to 1974. Short-term interest rates have shown wider fluctuations, ranging between 4.6 and 8.0% since 1975, but never falling to the 1.0 to 3.6% rates that periodically appeared from 1955 to 1974.

How does inflation impact the capital spending of business? To what extent have the high rates of inflation during the past decade limited business capital formation? What policies could be followed to minimize the harmful effects of inflation on business fixed investment? This statement deals with these issues, first explaining the mechanisms by which inflation affects investment; next, using computer simulations with the DRI model of the U.S. economy to analyze the quantitative impacts of autonomous changes in inflation on capital spending; then offering some suggestions for policy.

The organization of the statement is as follows. Section II discusses the manner by which inflation impacts on business fixed investment. Section III reports the results of simulating a lower inflation environment in the U.S. economy from 1966 to 1976. The simulation illustrates the impacts of an autonomous

reduction of inflation on the major factors that affect business capital spending, as well as the impacts on capital formation itself. Section IV contains some suggestions for policies to improve U.S. price performance, hence capital spending, or for directly raising capital formation, regardless of the state of inflation.

In summary, simulations with the DRI Model of the U.S. Economy show that less inflation during 1966 to 1976 would have had strong, beneficial impacts on business capital formation. An autonomous, sustained 2% reduction in the average rate of inflation during the period would have been associated with an average rise of $21.7 billion per annum of real spending on plant and equipment. Growth of real business fixed investment over the period would have been 4.4% rather than 2.0%. The ratio of business fixed investment to GNP would have averaged 11.4% rather than 10.0%. Productivity growth would have been 1.9% instead of 1.6%. The additional business fixed investment that arose in the Lower Inflation scenario stemmed from (1) higher real output growth in the economy (the "accelerator" effect); (2) lower short- and long-term interest rates, which impact on business fixed investment through the rental price of capital and reductions in the burden of debt relative to cash flow; (3) a lower rental price of capital goods from the reduced supply price of plant and equipment, lessened costs of financing, and a higher present value of the tax deductible depreciation changes stemming from new capital outlays; (4) improved profit margins in terms of the ratio of output price to the rental price of capital goods; (5) improved business profits and cash flow, enhancing the ease of internal financing of business capital spending; (6) a better stock market, reducing the cost of equity capital; and (7) higher capacity utilization rates because of the stronger economy, requiring a greater rate of replacement investment.

A better performance for business fixed investment in the future could be achieved by *autonomous* reductions in the wage and price inflation that is permeating the U.S. economy. Some variant of a TIP program would now be appropriate, with a "carrot" version of tax payments to employees for accepting slowed growth in wages a better tax expenditure than the straightforward $10 billion of tax reduction scheduled for 1979:1. Personal income tax reduction, through credits, should only be permitted where evidence of a pre-selected deceleration in wages or salaries was substantiated in a special form to be filed with individual tax returns. It is autonomous rises in wages, relative to productivity, that most importantly impact on inflation. Additional tax incentives to promote business capital formation should be enacted, most especially methods of indexing depreciation to better reflect replacement costs and additional investment tax credits for plant and equipment.[1] Historical cost expensing of capital goods purchases raises the effective profits tax on corporations significantly and limits the cash flow necessary to finance capital outlays. Tax credits and plant and equipment direct spending toward capital goods, rather than increasing the generalized purchasing power of corporations that cuts in profits taxes provide. Finally, a coordinated "tight fiscal-easier monetary" policy mix on the part of the Administration, Congress, and Federal Reserve is necessary, since the resulting stabilized or lower interest rates would stimulate business fixed investment, improve productivity, and perhaps even lessen inflation.[2] A "tight fiscal-easier money" approach, in the sense of keeping a tight rein on growth in government spending, would have little cost in terms of additional inflation, even with monetary growth between 7 and 8% per annum from 1977 to 1980.

II. INFLATION IMPACTS ON BUSINESS INVESTMENT

The impact of inflation on business fixed investment can be examined in two ways. First, inflation affects the rate of return on capital. Chart 4 shows a comparison between the after-tax rate of return on the capital stock of nonfinancial corporations and the inflation-adjusted return since 1955.

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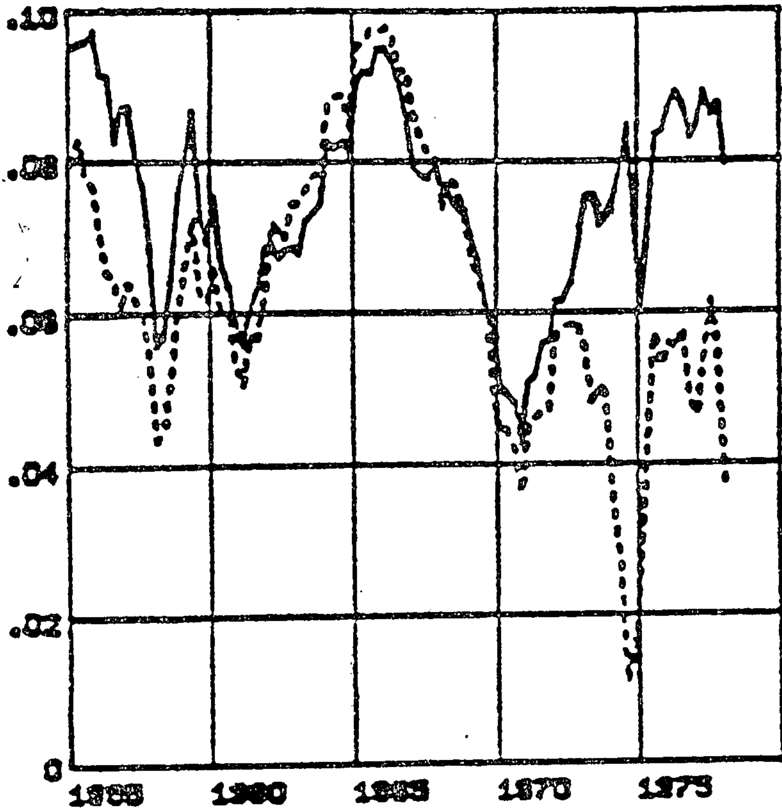
[1] See A. F. Brimmer and A. Sinai, "The Effects of Tax Policy on Capital Formation, Corporate Liquidity and the Availability of Investible Funds: A Simulation Study," *Journal of Finance*, May 1976, pp. 287–308.

[2] See A. Sinai, "Capital Formation and U.S. Economic Performance," in *Financing Economic Growth: The Problem of Capital Formation*, Center for the Study of American Business, Washington University of St. Louis, June 1977; also A. Sinai, "The Conduct of Monetary Policy: Performance and Prescriptions," *Hearings* Before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, May 10, 1977, pp. 262–269.

CHART 4. After-Tax Return on Capital: Adjusted and Unadjusted for Inflation*



The after-tax rate of return, denoted by the solid line, is the ratio of after-tax profits to the capital stock of nonfinancial corporations. The inflation-adjusted return on capital, denoted by the dashed line, is the ratio of after-tax profits plus the inventory valuation adjustment plus a capital consumption adjustment. The inventory valuation adjustment subtracts out capital gains on inventories, since replacement of inventories must take place at new higher prices and LIFO accounting has been so prevalent. The capital consumption adjustment also is a subtraction during inflation, since it is the difference between the estimated replacement costs of capital goods and the original cost used in accounting for tax purposes.

During the last decade, the after-tax return on capital has ranged between 5.6% and 9.8%, with a generally rising unadjusted rate of return between 1971 and 1976. However, the inflation-adjusted return on capital shows a much worse performance over the same period, especially after the great acceleration of inflation in the 70's. Coincidentally, the pace of business fixed investment slackened, with declines in real capital spending in four of the seven years between 1970 and 1977. Thus, when full account is taken for the impacts of inflation on real corporate profits, the expected return on capital has very definitely been on the decline.

Another way to analyze the impacts of inflation on business capital spending is through a structural econometric model of business fixed investment. In the DRI model, the explanatory framework for business fixed investment involves a disaggregation into real spending on plant and equipment. The approach to

modeling both decisions is similar and involves a generalization of the Jorgenson neoclassical approach to business capital formation.[3] Briefly, the DRI model investment equations extend the Jorgenson framework in several ways. The effects of pollution abatement equipment requirements are explicitly recognized in the accelerator or final sales measure of output; the endogenously determined financial position of nonfinancial corporations affects the pace of investment through changes in business cash flow and "financial risk" as measured by a debt service burden variable; the cost of financial capital in the Jorgenson-Coen definition of rental price reflects realistic after-tax corporate financing parameters, including the cost of equity financing; utilization rates, at less than full capacity, impact on replacement investment; and expectations of sales are compared to actual sales in a measure of "disappointment" or "business risk."[4]

The inflation effects on business fixed investment operate through each of these factors and some others, conveniently summarized as:

The accelerator: expectations of final sales, corrected for spending on pollution and abatement equipment;

Profit margin: the ratio of product price to the effective cost of capital goods or rental price;

Interest rates: both short- and long-term through a "debt service burden," the ratio of interest charges on outstanding debt to business cash flow, and the cost of financial capital, the latter based on both debt and equity financing;

Business liquidity: measured by the cash flow of nonfinancial corporations, adjusted for inventory valuation but not for the replacement costs of depreciation;

The stock market: stock prices through the weighted average cost of debt and equity, the cost "r" of financing business capital spending, and the rental price of capital goods;

The outstanding indebtedness of nonfinancial corporations: outstanding bank loans, commercial paper, and mortgage and bond debt through the debt service burden;

Capacity utilization: increased utilization of the existing capital stock requires a greater rate of replacement investment.

Taking these factors, the effects of inflation on business fixed investment can be described as follows. First, higher inflation causes reductions in real economic growth as purchasing power drops, interest rates rise, the stock market weakens, higher debt burdens restrain spending, and unemployment moves up. These events, which unfold with time lags, affect expectations of final sales and busi-

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[3] See D. W. Jorgenson, "Capital Theory and Investment Behavior," *American Economic Review, Proceedings,* May 1963, pp. 247–259; R. E. Hall and D. W. Jorgenson, "Tax Policy and Investment Behavior," *American Economic Review,* June 1967, pp. 391–414; R. M. Coen, "Effects of Tax Policy on Investment in Manufacturing," *American Economic Review, Proceedings,* May 1968, pp. 200–211; and R. E. Hall and D. W. Jorgenson, "Application of the Optimum Theory of Capital Accumulation," in G. Fromm, ed., *Tax Incentives and Capital Spending* (Washington, D.C.: Brookings, 1971), pp. 9–60. For a discussion of the framework used in the DRI model, see A. F. Brimmer and A. Sinai, "The Effects of Tax Policy on Capital Formation, Corporate Liquidity and the Availability of Investible Funds: A Simulation Study," *Journal of Finance,* May 1976, pp. 287–308; also ch. 4, "Business Fixed Investment," in Data Resources, Inc., *The DRI U.S. Macromodel Documentation,* Lexington, Mass., December 1977.

[4] Rental price is the technical term for the effective price of capital goods. The rental price is an index number for the price of plant and equipment. It principally consists of (1) an index of the quoted supply price, (2) a financial cost of capital, and (3) the economic rate of depreciation. The present value of the tax depreciation deductions that arise from capital outlays, adjusted by the corporate profits tax rate, also enters the rental price. The depreciation component in rental price, in turn, depends on the depreciation rule that is used, the lifetimes assumed for plant and equipment, and the rate used to discount the expected future depreciation. The investment tax credit is included as a component of rental price.

A simplified formulation of the rental price can be written as

$$c = q(r+\Delta)\frac{1-uz}{1-u}$$

where

c = rental price, an index number
q = supply price of capital goods, an index number
r = borrowing cost to finance the capital outlay
Δ = depreciation rate
u = statutory corporate tax rate
z = present value of $1 worth of tax depreciation stream of reductions arising from $1 of new capital goods.

Simply stated, the rental price per unit of capital is higher with increasing q, r or Δ, and lower as z increases. For z, as lifetimes of capital are shortened, the depreciation writeoff rises and the present value of the lifetime stream of depreciation is higher. Besides the lifetimes, z also depends on the accounting rule for depreciation that is used and the discount rate r. A tax credit k is included by multiplying the rental price expression by $(1-k)$. Finally, r may be calculated as a weighted average after-tax cost of finance with the principal modes debt or equity.

ness plant and equipment spending through the "accelerator." Second, a more rapid rate of inflation reduces the ratio of product price to the effective price of capital, or the "profit margin" on new plant and equipment. The combination of a higher supply price of capital goods, increased nominal costs of financing capital expenditures, and a lower present value for the tax deductable depreciation expenses, causes the rental price of capital goods to grow more rapidly than business can increase product prices. The lower marginal return on new capital goods negatively affects business fixed investment. Third, higher inflation raises both short- and long-term interest rates. Bond yields rise through the effect of inflation on the premium demanded by investors for supplying savings. Short-term interest rates rise through the pressure of increased nominal loan demands against the liquidity of the commercial banking system and as a result of the tighter monetary policy that it instituted to fight inflation. Rising interest rates impact business fixed investment by raising the rental price of capital goods, and by increasing the debt service burden of nonfinancial corporations relative to cash flow. Fourth, the higher interest rates damage the stock market, causing a rise in the cost of equity financing and an increase for the rental price of capital. Fifth, business profits and the internally generated funds available to finance capital outlays are sharply diminished during periods of rapid inflation, because of illusory inventory profits and the rising replacement costs for capital goods. Corporate profits are typically overstated during periods of inflation because of LIFO methods of inventory accounting and historical cost expensing for depreciation. In both cases, actual cash outlays for replacement of inventories and capital goods are much higher. After correction for these factors, the cash flow for nonfinancial corporations is sharply reduced. Sixth, higher inflation causes the nominal external financing requirements of business to grow and increases bank loan indebtedness, commercial paper issues, and the mortgage and bond financing necessary to fund desired capital outlays. This rising indebtedness raises the debt service burden of corporations and eventually restrains spending through the increased financial risk of corporate balance sheets. Finally, an autonomous acceleration of inflation can cause reductions in capacity utilization by limiting aggregate demand. Reducing the intensity of use of existing capital lowers replacement investment.

Together, these factors make for sizable reduction in the rate of business capital formation during periods of rapidly rising prices. To the above endogenous influences must be added the potential restraining effects on aggregate demand from tighter fiscal and monetary policies. The effects of restrictive stabilization policies on expected sales can be quite substantial and sharply diminish the planned rate of capital outlays by business.

III. LOWER INFLATION AND BUSINESS FIXED INVESTMENT: A SIMULATION

In order to assess the impacts of inflation on business fixed investment, the DRI Model of the U.S. Economy was simulated over the 1966 to 1976 period under the assumption of an autonomous reduction in wages.[5] An autonomous 1% decrease in the rate of change in wages eventually flows to a 0.7 or 0.8% change in the inflation of final goods prices. In the full model simulation, the difference reflects the impacts of the changed inflation environment on labor productivity.

Table 2 summarizes the results from the autonomous lowering of wages (Lower Inflation) over the full 11 year period. The Baseline simulation is a ful dynamic historical solution of the DRI model from 1966 to 1976, and tracks the actual data quite closely.

The *autonomous* reduction of inflation is quite beneficial to the economy, offering support for the view that accelerated inflation is a cause of recession. A qualification to this conclusion, however, is that the reduction of inflation must be autonomous. If tighter fiscal and monetary policies had been used to restrain the inflation, the economy would not have benefited as in the case of the autonomous shock that reduced the inflation. Similarly, the most damaging impacts on the economy would arise from exogenous shocks that raise inflation, such as the OPEC quadrupling of prices in 1973–74, a commodity price explosion from

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[5] The simulation is meant to be illustrative of the effects on business fixed investment from an autonomous reduction in inflation. The choice of wages as the lever for inflation was made simply for convenience, although it is certainly true that wage impacts on inflation are quite considerable. However, numerous other means of reducing inflation could have been selected, including autonomous reductions in energy prices, food price inflation, basic materials commodity costs, or others.

shortages of food and fuel, increases in minimum wages or social security taxes, or inflation because of a depreciating dollar.

The autonomous 2.7% average reduction of wages in the Lower Inflation scenario is associated with an average 2.1% decline of inflation over the 1966 to 1976 period. The difference is accounted for by improved labor productivity, with growth over the period at 1.9% rather than the 1.6% of the Baseline solution. The lower inflation is accompanied by a 3.4% average rate of growth in real GNP, 0.5% higher than in the Baseline. The unemployment rate averages 3.5%. Thus, the autonomous lowering of wages actually pushes the "Phillips" curve downward.

TABLE 2.—LOWER INFLATION SCENARIO RELATIVE TO BASELINE, 1966–76: THE DRI MODEL RESULTS

	1966–76 average
Inflation:	
Wages (percent):[1]	
Baseline	6.8
Lower inflation	4.1
Prices (percent):[2]	
Baseline	5.6
Lower inflation	3.5
Economy:	
Real economic growth (percent):	
Baseline	2.9
Lower inflation	3.4
Real business fixed investment (billions of 1972 dollars):	
Baseline	115.8
Lower inflation	137.2
Housing starts (millions of units):	
Baseline	1.598
Lower inflation	2.235
Capacity:	
Unemployment rate (percent):	
Baseline	5.3
Lower inflation	3.5
Utilization rate (percent):	
Baseline	83.3
Lower inflation	85.3
Productivity (percent):[3]	
Baseline	1.6
Lower inflation	1.9
Interest rates:	
Federal funds:	
Baseline	6.32
Lower inflation	5.58
New issues of corporate bonds:	
Baseline	7.58
Lower inflation	6.30
Profits—Nonfinancial corporations:	
Nominal (billions of dollars):	
Baseline	45.4
Lower inflation	46.5
Inflation adjusted (billions of dollars):[4]	
Baseline	35.3
Lower inflation	42.4
Debt burden—Nonfinancial corporations (ratio):[5]	
Baseline	.26
Lower inflation	.19
Percent of business fixed investment to GNP, adjusted for pollution abatement expenditures (percent):	
Baseline	10.0
Lower inflation	11.4

[1] Wages are measured by the annual rate of change of adjusted average hourly earnings.
[2] Prices are measured by the compound annual rate of growth in the implicit price deflator.
[3] Productivity is measured by the compound annual rate of growth in output per hour of all persons—Nonfarm business sector.
[4] Inflation adjusted profits equal nominal profits plus a capital consumption adjustment plus inventory valuation adjustment.
[5] Debt burden equals the sum of a weighted average of past new issue rates multiplied by the beginning-of-period level of bonds, a weighted average of past prime rates multiplied by the beginning-of-period level of bank loans, and a weighted average of past 4 to 6 mo commercial paper rates multiplied by the beginning-of-period level of open market paper, all divided by cash flow. Cash flow equals the sum of retained earnings, foreign branch profits, capital consumption allowances, and the inventory valuation adjustment.

The major strength in the Lower Inflation scenario, relative to the Baseline simulation, occurs in the interest rate sensitive areas of the economy. In particular, real business fixed investment averages $137.2 billion from 1966 to 1976, compared to the $115.8 billion of the Baseline. Housing starts average near 2.2 million units, about 640,000 units higher than in the Baseline. Interest rates are considerably lower, with the Federal funds rate some 80 basis points below the Baseline solution and the yield on new issues of top-quality corporate bonds averaging 6.3% over the period. The corresponding figure in the Baseline simulation was 7.6%. Nonfinancial corporate profits are considerably higher after adjustments for inflation; $42.4 billion in the Lower Inflation case compared with $35.3 billion in the Baseline The debt burden of nonfinancial corporations never reaches the peaks that were associated with the credit crunches of 1966, 1969–73, and 1973–74, averaging 19% instead of the 26% in the Baseline solution. The ratio of business fixed investment to Gross National Product, adjusted for pollution abatement expenditures, averages 11.4% instead of the 10% of the Baseline solution. By the mid-70s this ratio moves above 12% of GNP, the target recently set by the Administration.

Charts 5 to 22 summarize the effects of the lower inflation on (1) the economy; (2) business fixed investment; and (3) the major factors that cause the improvement in business capital formation.

CHART 5. Real Gross National Product: Baseline and Lower Inflation Simulations (Billions of 72 $'s)

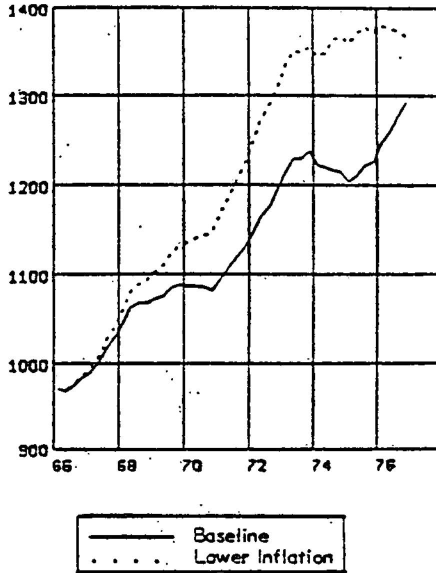


CHART 6. Inflation Rate: Baseline and Lower Inflation Simulations (Percent)

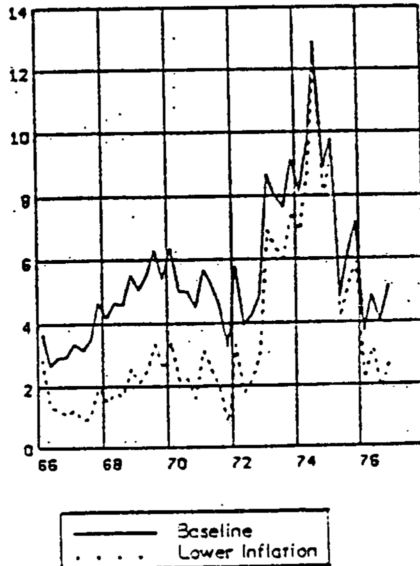


CHART 7. Expected Rate of Inflation: Baseline and Lower Inflation Simulations (Percent)

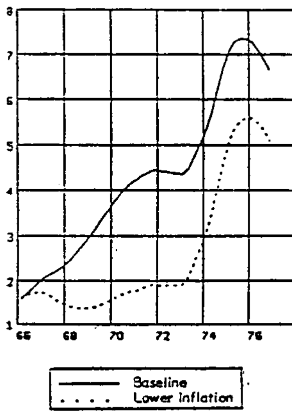


CHART 8. Unemployment Rate: Baseline and Lower Inflation Simulations (Percent)

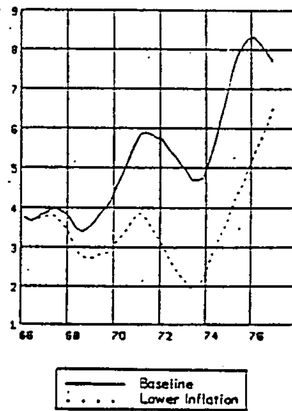
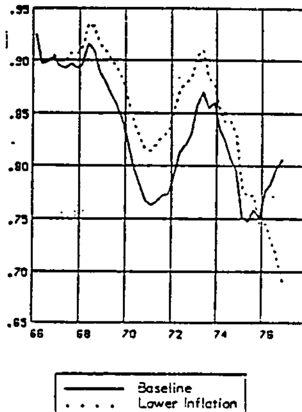


CHART 9. Capacity Utilization: Baseline and Lower Inflation Simulations



The economy performs considerably better in the Lower Inflation scenario, although there is a two-year lag before real GNP moves significantly above the Baseline figures. The effects of increased purchasing power on consumption, lower interest rates and a stronger stock market on the economy, higher levels of final sales on business fixed investment, and a reduced rate of unemployment on inflation expectations take time to unfold. The sustained reduction of inflation has major impacts on the performance of the economy during the 1970's, although the inflation itself is no better during 1974 than in the Baseline. The much stronger demand and full employment of the Lower Inflation scenario push inflation to the Baseline value in spite of the autonomous reductions in wages. And, the external shocks of OPEC price rises and the commodity price explosion also keep the rate of inflation near the baseline values.

Business fixed investment

CHART 10. Real Business Fixed Investment: Baseline and Lower Inflation Simulations (Billions of 72 $'s)

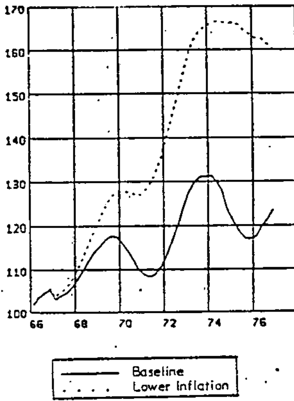


CHART 11. Real Nonresidential Investment in Structures: Baseline and Lower Inflation Simulations (Billions of 72 $'s)

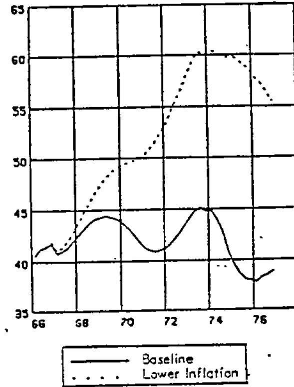


CHART 12. Real Business Equipment Expenditures: Baseline and Lower Inflation. Simulations (Billions of 72 $'s)

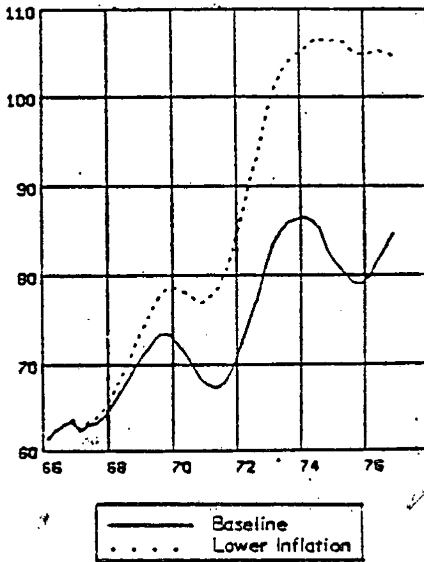
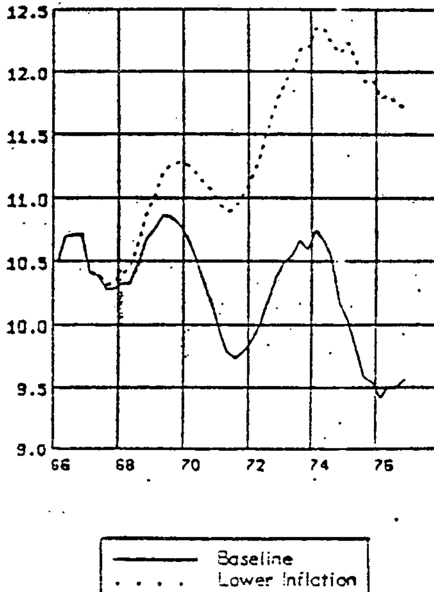


CHART 13. Real Business Fixed Investment as a Percentage of Real GNP: Baseline and Lower Inflation Simulations (Percent)

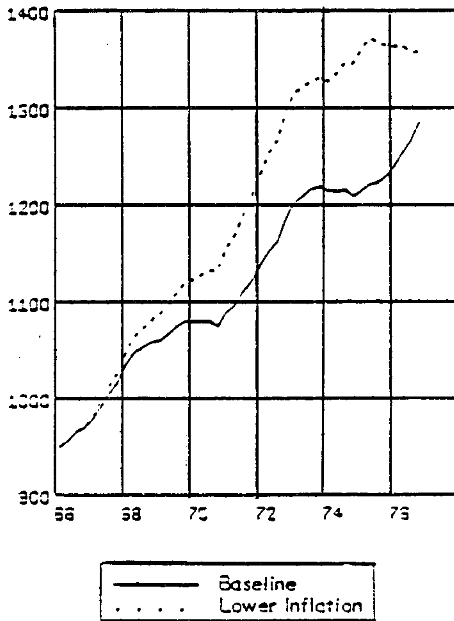


Business fixed investment, in real terms, moves substantially higher under the Lower Inflation scenario than in the Baseline. In particular, the rate of increase is much greater for 1971 to 1975, with real spending on both plant and equipment benefitting. The proportion of real business fixed investment to real GNP begins to rise above the Baseline path in 1969, remains in excess of 11% except for 1971, then increases sharply to over 12% from 1973 to 1975. Chart 13 indicates that the lower inflation has a relatively greater effect in stimulating business capital outlays than the other real final demands.

Determinants of business fixed investment

A. The "Accelerator"

CHART 14. Real Final Sales: Baseline and Lower Inflation Simulations (Billions of 72 $'s)



B. Profit Margin

CHART 15. Ratio of Output Price to Rental Price of Capital (Equipment): Baseline and Lower Inflation Simulations

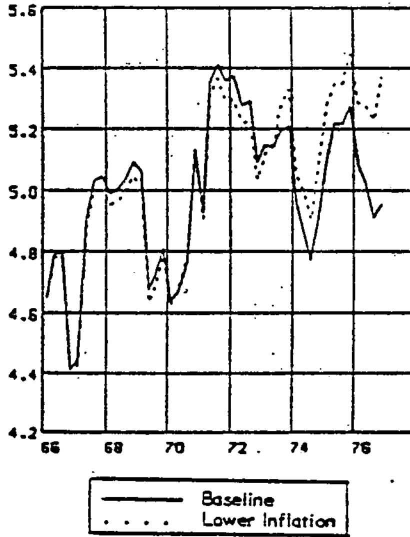
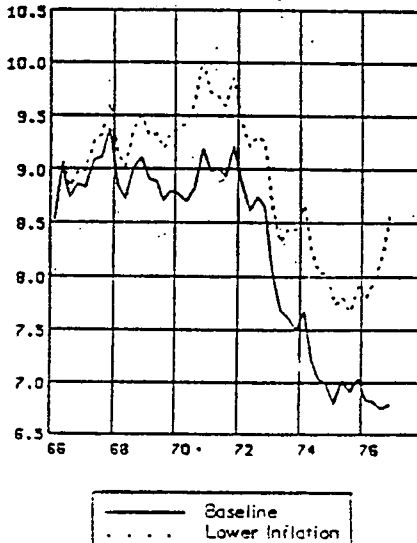


CHART 16. Ratio of Output Price to Rental Price of Capital (Structures): Baseline and Lower Inflation Simulations



C. Interest Rates

CHART 17. Federal Funds Rate: Baseline and Lower Inflation Simulations (Percent)

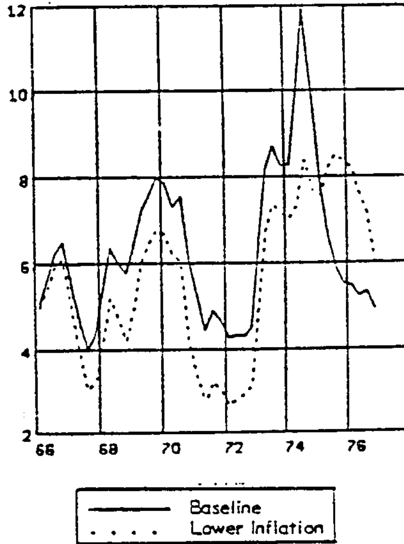
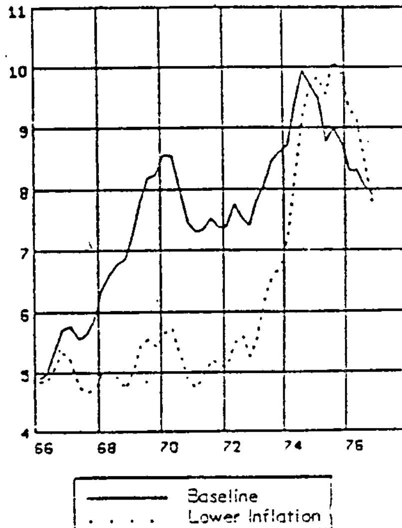
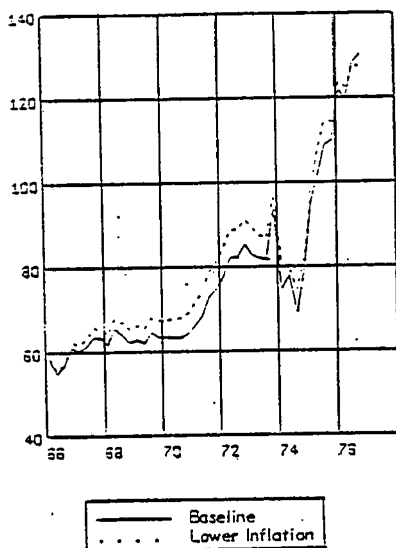


CHART 18. High-Grade Corporate Bond Yield: Baseline and Lower Inflation Simulations (Percent)



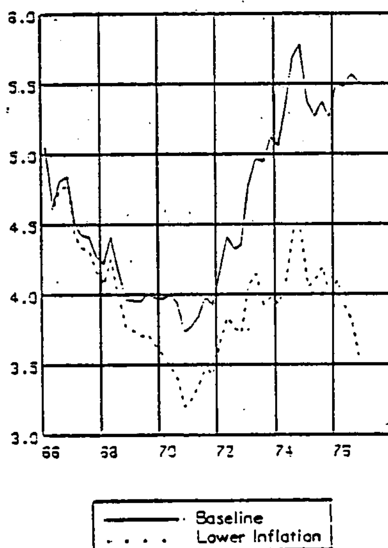
D. Business Liquidity

CHART 19. Nonfinancial Corporate Cash Flow: Baseline and Lower Inflation Simulations (Billions of $'s)



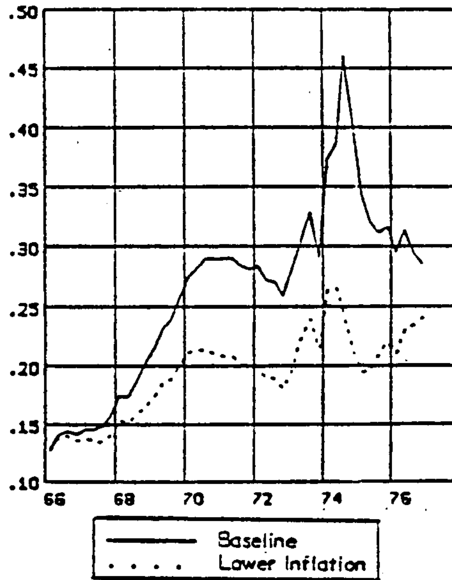
E. Stock Market

CHART 20. Average Cost of Capital After Taxes: Baseline and Lower Inflation Simulations (Percent)



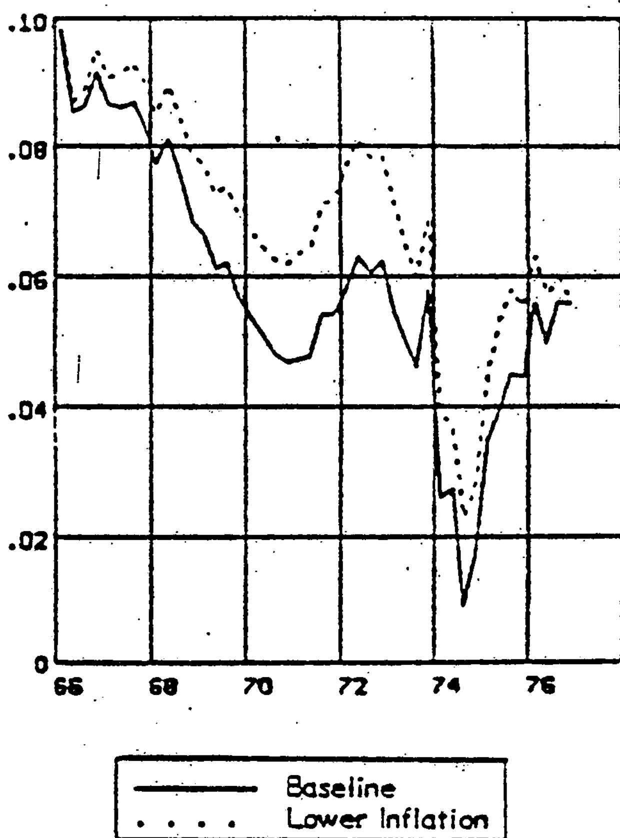
F. Business Indebtedness

CHART 21. Debt Burden Ratio, Nonfinancial Corporations: Baseline and Lower Inflation Simulations*



*Debt burden equals the sum of the weighted average of past new issue rates multiplied by the beginning-of-period level of bonds, the weighted average of past prime rates multiplied by the beginning-of-period level of bank loans, and the weighted average of past 4-6 month commercial paper rates multiplied by the beginning-of-period level of open market paper, all of which are divided by cash flow. Cash flow equals the sum of retained earnings, foreign branch profits, capital consumption allowances, and the inventory valuation adjustment.

CHART 22. After-Tax Return on Capital: Ratio of Nonfinancial Corporate After-Tax Profits, Adjusted for Inflation* to Nonfinancial Corporate Net Capital Stock: Baseline and Lower Inflation Simulations



*Includes adjustment for inflation effects on inventory profits (inventory valuation adjustment) and replacement cost of investment goods (capital consumption adjustment)

IV. PRESCRIPTIONS FOR POLICY

The illustrative simulation for the effects of lower inflation on economic performance and business capital formation underscores the importance of coming to grips with the current U.S. inflation problem. At the same time, it must be recognized that methods for autonomous reductions of inflation, or "deflationary shocks," would benefit the economy more than reductions of inflation induced by restrictive general stabilization policies.

The results of the Lower Inflation scenario can also be seen in terms of the effects on the after-tax rate of return on capital (Chart 22).

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The Administration has implicity recognized this fact through the jawboning of deceleration that was begun in April. Chipping away at wage and price inflation through acceptance of reduced salary hikes, increased beef import quotas, additional supplies of lumber, marginal reductions in product price increases relative to previous years, all will serve to stimulate aggregate demand, real output, employment, and eventually business capital spending. Removing barriers to competition that induce artificially high prices, limiting regulations that add to or prop costs and prices, minimizing wage and farm price supports, establishing monitoring systems to prevent bottlenecks and shortages from arising in particular industries, promoting an energy program of self-sufficiency, substituting general revenue financing of Social Security for a portion of the payroll tax, maintaining buffer stocks of basic commodities and strategic materials, all would fall within the domain of autonomous changes to the rate of inflation.

However, these measures together could perhaps account for only ½ to 1½% of the existing inflation. The most promising alternative policy so far to effect a more significant autonomous reduction in wages is the TIP program suggested by Henry Wallich, Sidney Weintraub and Arthur Okun.[6] In particular, a variant involving the payment of subsidies to employees for voluntarily reducing wage demands would provide a large "bang for a buck" of lost tax revenue. Lower wage costs have a highly levered impact on inflation, hence on the performance of the economy and business capital formation.

A "carrot" approach of rewarding reductions in wages through personal income tax credits would be preferable to the "stick" approach where tax penalties are levied on employers who accede to high wage demands. In the former case, autonomous reductions in wages would lead to increased economic output and effects similar to those simulated in the Lower Inflation scenario. The tax revenues gained from the stronger economy would offset a sizeable portion of the revenue loss from the direct subsidies to employees. The latter approach would simply raise business costs and lend to higher product prices.

Therefore, instead of offering $10 billion of personal income tax reductions in 1979:1, the Administration should provide $10 billion of tax credits to households who agree to a policy set deceleration in wage and salary hikes over the next year. An additional form could be provided to claim the credit, with supporting documentation from the employer. Such an approach, aside from the administrative costs and difficulty in implementing such a new innovation, would be highly beneficial to the economy, business fixed investment, productivity, and eventually inflation. We should also look for other ways to accomplish the same result, such as providing tax credits to employees in industries with above average productivity results.

A second set of policies can be used to increase business capital formation and productivity even with the high inflation of the U.S. economy. These include specialized tax incentives for business to induce a greater rate of capital formation and an improved financial position. The most stimulating measures for business fixed investment would be higher depreciation allowances, to more closely approximate replacement costs of new plant and equipment, and additional investment tax credits.[7]

Most econometric studies show a larger rise in real business fixed investment per dollar tax loss for tax credit and depreciation measures than for reductions in corporate profits taxes.[8] The major benefit from reducing business profits taxes lies in the increased availability of funds to corporations. However, there is no guarantee that these funds will flow to business fixed investment rather than other uses. In the case of higher depreciation allowances and investment tax credits, the tax reductions are tied to additional spending on plant and equipment. The Administration's proposals for business tax relief stress reductions in corporate profits taxes and include only a minor change in the investment tax credit. A preferable approach would be to institute an indexation scheme for tying depreciation expenses to inflation and to stress more investment tax credits.[9]

Finally, another policy approach which should stimulate business capital formation, although not come to grips with the inflation problem except only gradu-

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[6] See H. C. Wallich and S. Weintraub, "A Tax-Based Incomes Policy," *Journal of Economic Issues*, vol. 5 (June 1971); A. M. Okun, "The Great Stagflation Swamp," *Challenge*, vol. 20 (November/December 1977); S. Weintraub, *Capitalism's Inflation and Unemployment Crisis: Beyond Monetarism and Keynesianism* (Addison-Wesley, 1978).

[7] See Brimmer and Sinai, *op. cit.*, pp. 287–308.

[8] *Ibid.*, pp. 294–298.

[9] *Ibid.*, pp. 288–290; 294–298.

ally, is what I have dubbed in previous work as a "tight fiscal-easier money" approach.[10] By tight fiscal policy is not meant decreased expenditures by the government. More realistically, it refers to slower growth in government spending than has been the case in previous years. The "easier money" component of a tight fiscal-easier money policy also does not refer to a radically extreme measure. By easier money is meant a Federal Reserve policy that permits money growth between 7½ and 8% per annum in recognition of the difficulty in reducing the cost-push 5 to 6% "core" inflation of the U.S. economy. The tight fiscal component would simply make monetary relaxation a more agreeable choice for the central bank.

In the case of a "tight fiscal-easier money" approach, the slowed growth in government expenditures would have contractionary effects on real output and employment that would be more than offset by the easier money, but with a better result for business fixed investment and productivity. Along with the slowed growth of Federal government spending would come a smaller budget deficit. The flow of new Treasury issues to the financial markets would drop with a resulting easing of pressure on short-term interest rates. The slowed growth in output and easing of inflationary pressure would reduce the transactions demand for money, lower M1 growth, and cause a stabilization or decline of interest rates. In response, the flow-of-funds to financial institutions would rise, mitigating the negative effects of residential construction from the weaker economy by increasing the availability of mortgage money.

Most importantly, however, restraint on fiscal policy could enable the Federal Reserve to ease monetary policy. Sustained periods of heavy deficit spending by the Federal government have generally constrained the monetary policy posture of the Federal Reserve by stimulating the economy too strongly. As a result, monetary policy has often been tightened when fiscal policy was stimulative. A stimulative fiscal policy increases pressure on the financial markets directly, but also because of the induced expansion in the private sector. At the same time, a tighter monetary policy intensifies the rise in interest rates. The result has almost always been a credit crunch and recession because of the powerful effects of money and finance on the economy. The tight fiscal-easier money approach would lead to the opposite situation.

Restrained growth in Federal government spending and easier monetary policy, with the latter defined in terms of higher targeted money growth rates, would bring lower interest rates, reduced debt burdens, increased flow-of-funds in markets where rationing occurs, and an improved stock market. Spending on housing, consumption, and business fixed investment would be stimulated. If the policy were sustained, a greater rate of capital formation would occur than with the sole use of monetary or fiscal policy.[11] Further, with a lower rate of growth in Federal government spending, Treasury debt issues would comprise a smaller proportion of the total financing in the economy, lessening the chances of "crowding-out".

Thus, our work with the DRI model indicates that progress against inflation and toward increased business capital formation can be made. A start has been made toward a "tight fiscal-easier money" approach. The outcome for legislation on business tax incentives is in doubt, but indexing depreciation to inflation or accelerating depreciation is an option that should be considered. Most importantly, the time has come for a direct attack on wage inflation through a "carrot" form of a TIP program.

Mr. SHELDON. Thank you very much, Mr. Sinai.

The next participant is Mr. Robert R. Chambers, vice president for new business ventures at Atlantic Richfield. He is both a chemist and lawyer. He received his Ph. D from the University of Illinois, J.D. from De Paul University. He was associated earlier in research with the Sinclair Oil Co. and then came to Atlantic Richfield.

We are glad to have you with us because earlier in the fall we had half a day with you and you were very helpful to us in exploring some of the issues and problems of research.

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[10] A. Sinai, "Capital Formation and U.S. Economic Performance," and A. Sinai, "The Conduct of Monetary Policy: Performance and Prescriptions," *op. cit.*

[11] See Sinai, *ibid.*, for the simulation results that support this argument.

STATEMENT OF ROBERT R. CHAMBERS, VICE PRESIDENT, ATLANTIC RICHFIELD CO., LOS ANGELES, CALIF.

Mr. CHAMBERS. It was a most interesting experience, Mr. Sheldon.

Looking at my two colleagues on the panel here, I felt it would be useful to talk about a little different aspect of the investment area.

First, I think it is noticeable, although I do not have the economic background that some others here do, that commitments have trended toward short-term investments; investments that pay off quickly. At the same time, from an overall view, I think it is pretty evident that the country needs more long-term investments, in at least a couple of areas.

First of all, much of our basic industry plant is getting a bit obsolete and completely new, basic industry units are not really being built much.

The second thing is that we have a number of major problems which are going to require major investments of a pretty long-range nature, and I refer to problems such as urban problems, water resource problems, major housing problems; and I think that the trend toward short-range investments by private industry is tending to bypass these kinds of problems.

Now, I would certainly want to second the kinds of conclusions that have been talked about here; that is, what has been said about inflation and various financial modifications that need to be made to present a more attractive environment for investment. All of these very much affect the normal investment decisions. The normal investment decisions are short-range decisions, and are governed by these factors; but long-range decisions, and I am talking in terms of, say, a 15-year project, are affected by additional factors.

Long-range investments have always had more hazards than short-range investments. One always takes the risk that in the longer run some new technology will come along and displace what one is investing in, or the customers will change their minds about what they want, move from one area of the country to another or something like that. I think that business is used to these kinds of factors, and we have in the past gotten long-term investment in building this country.

The thing that is new over the past decade is the huge upsurge in Government regulations and the effect that a lot of kinds of regulations are having on long-term business investment decisions. I am referring specifically to things like peacetime price control types of regulations. I am referring to the tremendous upsurge in regulations on land usage, for example; and coming from California, this has gotten to the point where it is highly questionable whether you can build a heavy industry plant in that State at the moment.

There are new findings which are incorporated in regulations findings about safety of workers; findings about what should be approved for use by customers; what might upset the neighbors of some investment; what might be offensive to somebody esthetically, perhaps; what sort of rare species of plant or animal might be involved; and these things can cause a long-range high-investment project to come to a halt.

Now, if you ask yourself if you had been making an investment 15 years ago, how many of these factors you would have predicted, I

think for most of us the answer has to be, frankly, very few. We would not have thought 15 years ago that these factors could have influenced whether or not we could utilize investments we were then making.

So what has to be answered is the question of how many new Government regulations will be invented in the next 15 years. The rate at which these regulations are coming up and are affecting the return from investments seems to be, if anything, tending to accelerate over the last few years.

What I am saying, then, is in considering a long-range investment what management has to consider, and in many cases does consider, is whether or not there is any jeopardy from unknown and unforeseeable Government regulations. This is a psychological matter, not a question that can be laid to rest by Government financial adjustments, by incentives, by even perhaps reduction of inflation. Not that all of those are not very important factors in most investment decisions.

I do not want to ignore the fact that companies are going ahead and making some long-term investments; I think it is reduced, but still going on. But my view is, to a large extent, these are reflections of inertia in the system, and as the real hazards become digested on and more widely known, long-range investments will continue to decline from where they are today.

Well, then, what is the answer? It is a lot easier to say what is not the answer. First of all, I do not really think that for the long-range investment decisions special economic inducements are the answer unless they are of such a nature and magnitude that they are able to convert a long-range investment into a short-range one. Outside of that, though, I think the incentives are not going to solve the long-range problem, and I think that businesses have the impression that incentives will eventually be held against them politically.

Second, should we then abandon the social and environmental goals? Clearly this is unthinkable, and I certainly do not think that we can either ask for or want anything like that to be done on behalf of long-range investments.

Third, it would be helpful in promulating regulations if the Government did a much more careful job of balancing the benefits against the costs of new regulations, and perhaps a much more thorough job of discussing them and making the choices in a more scientific or objective manner. Unfortunately, I do not think this is realistic either. Most of these regulations are promulgated in a political climate in which there are many forces which shape the regulation, and I do not think anybody would believe that this is going to change.

Well, then, I have merely one suggestion, and that is this: Given that economic activity is based on the concept of private property, it is time to consider a reemphasis of a principle that is already well established in our law, which is that the Government, while it may take and is certainly entitled to take private property in the public interest, should pay for it.

This was established in the beginning with respect to land when most of the wealth of the country was in real estate; and even today the Government does not just take real estate without condemning it and paying for it. However, in the 200 years that have passed a great

many more complicated private property rights have developed and the value of private property has gotten distributed around in many things other than land. As far as I can tell, the protection of this principle has not really been extended to many of those other property rights, and I think consideration should be given to doing that. Thank you.

[The prepared statement of Mr. Chambers follows:]

PREPARED STATEMENT OF ROBERT R. CHAMBERS

My name is Robert R. Chambers. I am vice president of the Atlantic Richfield Co. in charge of new business ventures.

It appears to me, as well as nearly everyone else, I gather, that investment in new enterprises and expansion of facilities in this country is at a considerably lower rate than we would like to see it at this stage of the business cycle and for the future of the country. While there are others, two of the most significant reasons for this, in my opinion, are inflation and the uncertainty created by government.

Inflation, given our basic economic framework, leads people to spend rather than save, to borrow rather than lend. Inflation raises the interest rate, which in turn raises the rate of return hurdle, so that only the high payoff, short-term profit projects are attractive. However, there are others present who are much better qualified than I to speak on this subject. Perhaps the investigations by Congress here and in other committees will demonstrate that the less obvious effects of inflation are really much more damaging than its more evident attractions, and thus draw together enough political sentiment to do something about the matter.

My comments this morning arise out of my own particular assignment in the Atlantic Richfield Company: that of finding new businsses for it to enter. We seek new business opportunities because we are being edged out of the producing business in many foreign countries and, here at home, we are limited both by lack of opportunity and by increasing difficulty in finding new domestic oil reserves. Moreover, the industry is becoming completely entangled in government controls.

My job, in a large company, is to look for large new things to do; things that will have an impact on our overall position. This is a long-term program. My objective is to get us going on things which will be contributing significantly to the economy and to the Company in about fifteen years—say, 1993.

A major obstacle in this attempt to mount a program for long-range investments is that you just can't find people who will make believable forecasts for 1993. You just can't make reasonable predictions of prices or of costs. Fifteen years seems to be beyond the range in which a purely economic forecast can be considered reliable. Everyone assumes that the government will have instituted substantial changes in the rules by that time which will overshadow the normal market forces which can be extrapolated. Consequently, in these long-range projects, as contrasted to the every day business decision, a few points plus or minus in the rate of return calculation are not significant in the investment decision and neither is the existence of finely tuned economic incentives.

As a working hypothesis, I am pretty much reduced to the assumption that I am looking for a business (1) in which we would like to participate in the future and (2) which appears to offer satisfactory market opportunities. I have to assume that if these conditions are met, the rate of return will be good, or at least better than the average at that point. The question which might be of general interest then is: What sort of business would one like to enter today feeling that one could expect an adequate return if one attained a good position in it fifteen years off? This is the same question which has to be considered by a company deliberating a long-term fixed investment decision in an existing line of business.

The unfortunate conclusion I have reached is that it is difficult to find good opportunities for long-term investment. Certainly this is not from lack of needs to fill, or technology to be applied or perhaps even money to invest. It is just difficult to predict an attractive economic future in most areas.

It is not only difficult to predict that some specific business will be attractive in fifteen years, but it is difficult to predict the general structure of the economy

fifteen years out. It is fortunate this has not been the case in this country during such periods of major industrial growth as the time immediately following World War II. Not very long ago, we were able to make long-term commitments, build grass roots plants and invest in capital and resource intensive industries with reasonable confidence based on our predictions of the market conditions. No doubt such confidence was often misplaced, but the business-governmental climate was conducive to economic growth.

In my view, it is not only inflation but also the increasing rate at which government in all its branches is changing the rules of the game which complicates business forecasting. Increasingly, these two factors combine to inhibit long-term investment.

Market projections, raw material availability, geographic movements, etc., are the type of trends which business can understand, watch evolve, and place their bets on. Usually, if the predictions are wrong, a business will have some ability to accommodate. It's a game that makes economic sense, benefits the country, and induces investment.

But, recent and threatened regulatory changes are another matter. These can have a devastating effect. They can turn a business around overnight. Because of this, these regulatory threats can have a psychological influence on long-range commitments far out of proportion to the actual damage done. They can destroy the ability to predict. They give rise to concern about further unforeseen changes in the future. All this may sound pretty intangible, but when one loses the ability, as we have, to make reliable economic predictions for the longer range, we necessarily have to base decisions on intangible factors.

What then, needs to be done? I don't think it is necessary to abandon all social programs or turn away from environmental protection. I would suggest, however, that we stop ignoring a simple rule of fair play which is one of the basic foundations of our legal system. The principle is that if the government wants to take private property, it ought to compensate the owners. Increasingly, government seems to ignore private property consideration in such mechanisms as wage and price controls, profit limitations, zoning regulations, etc. Property rights have fallen to such low esteem that there have been decisions to abandon large, long-term investments on the basis of environmental or health considerations that are demonstrably trivial.

In order to restore a favorable climate for major long-term investment, it is not enough to put the investors in line for benefits and incentives along with the other interest groups. These are temporary expendients, and are seen as such. We need a new consensus on what is fair. We do need to press ahead toward environmental and social goals. But, there must be reasonable balance between these objectives and a healthy economic climate.

With this kind of balance, I think confidence in government, and recognition of the legitimate role of the private sector can be restored and long-term investment be put back on the track.

Mr. SHELDON. Thank you very much, Mr. Chambers.

Our third participant is Mr. Gary M. Wenglowski. After receiving his doctorate at the University of Pennsylvania he joined Goldman, Sachs & Co., where he has been director of economic research and vice president since 1967.

Mr. Wenglowski, please proceed.

STATEMENT OF GARY M. WENGLOWSKI, DIRECTOR OF ECONOMIC RESEARCH AND VICE PRESIDENT, GOLDMAN, SACHS & CO., NEW YORK, N.Y.

Mr. WENGLOWSKI. Yes. I would like to focus on two questions. First, it is the hypothesis that high inflation and uncertainty have held back capital spending. I would like to take a dispassionate look at the statistical evidence and try to see whether there are any other factors that have been causing the recent weakness in capital investment.

Second, after doing that, I would like to discuss a slightly more theoretical concept which builds a little bit on Mr. Sinai's discussion

regarding the differential impact that inflation has had on the cost of capital to business versus the rate of return on investment and the implications of this for investment and for Government policy.

I think a good place to begin is to look at the behavior of business investment during the last 3 years and see the differences in comparison with investment spending in the earlier postwar business expansions.

Since our approach is to look at the differences in capital spending by major types of investment, I think it is worthwhile pointing out the great variety in the types of equipment and structures we lump under the general category "business investments." In my prepared statement, if you look at table 1, there is the 1977 composition of business fixed investment. As you can see, about two-thirds is investment in equipment. The largest single category there is investment in automobiles and trucks on the part of business. About one-third is nonresidential structures, and there you can see the great diversity. The largest categories of investment in structures are investments in commercial structures, which are shopping centers, office buildings, and so forth; and investment in utilities. What we normally think of as investment in industrial plants is really a small portion, about 4 percent of total business fixed investment. So, we are talking about a varied group of investments.

If you turn to the first of the charts, chart 1, here we look at the behavior of business investment in equipment in the current business cycle and how it compares with the experience in the average postwar cycle. Our conclusion in looking at this evidence is that there is very little difference between business investment in equipment in the current cycle, as shown on the bottom on chart 1, versus the average. It turned up a little later this time, as shown by the dotted line, but one of the anomalies in the expansion was that business investments in equipment kept going up longer into the recession. The gap between the dotted and black lines has closed appreciably over the past couple of years. So we would argue that given the difference in the nature of the recession, the fact that it was deeper, probably completely explains the small difference in the behavior of business investment in equipment.

A shart showing the behavior of business spending on structures is included in my prepared statement. Structures represent about 33 percent, as I mentioned earlier, of total business investment; and here, indeed, there is a very large discrepancy, as you can see from the top panel. For example, the volume of business investment in structures in the first quarter of 1978 was running about the same as 13 years ago. In addition, the increase in business investment in structures has been very modest, if any, in this expansion compared with past expansions, as you can see by the line on the bottom of that chart.

Generally, investment in structures represents a much longer run commitment than investment in equipment. And this lag in investment in structures is often cited as evidence of a greater reticence of business to make long-term investments in recent years. The hypothesis before this group is the role of higher inflation and uncertainty in explaining this greater reticence to make investments in long-lived capital assets, particularly structures.

If you look at the behavior of investment in the major types of structures, it appears that, although uncertainty and high inflation are

contributing to the weakness in investment, they are not the only causes. It is not the only factor that is playing a role. I would mention three other factors that probably account for a significant amount of the shortfall in investment.

First, the last recession was much deeper than average and capacity utilization during the recovery was much lower. If you turn earlier in the prepared statement to table 2, it shows just how much lower capacity utilization has been in this recovery. For example, 12 months after the economic trough in the average postwar recovery, manufacturers' utilization was up to 83.9 percent on average. And 12 months after the most recent recession, it was only 79.1 percent. Also 24 months after the average postwar economic trough utilization rates were about 83.9; whereas, in the most recent recession, 24 months later it was only 81.2.

In addition, if you look at some of the other charts, some industries spent heavily on structures in 1965 to 1970, particularly the telephone industry and electric utilities, which together account for a very big portion of investment in structures; and you might argue that this met some of the needs for the future. So, I would say that excess capacity, not only in the United States but worldwide, had a significant role in the anomalies we observed in capital spending, along with the role of general uncertainty and inflation.

Second, more stringent environmental regulations have increased the timelag between the investment decision and investment spending. We hear this from many businessmen, and this is probably accounting for some of the slower recovery in structures' investment.

It is interesting that the largest shortfall in investment spending in this recovery from the average postwar recovery is in commercial construction. That is where the biggest shortfall shows up, and I think the environmental regulations are having a big impact there.

Third, I would point out that in some industries like telephone and utilities in particular there is a belief that long-run demand for their services is now rising less rapidly, and that has reduced expected capacity needs. Therefore, I believe some of the lag in spending on long leadtime items is probably due to a short-run excess capacity on a worldwide basis. However, this does not mean that we are out of the woods, because as capacity utilization rises there is a risk that investment in structures and the longer leadtime items may still lag behind what is necessary. This is because of the differential impact that inflation has had so far on the cost of capital to business, which is something we on Wall Street are very sensitive to, relative to the rate of return on investment.

Very much like Mr. Sinai, I think you can analyze the impact of increased inflation on the capital spending decision by analyzing its impact on the traditional capital budgeting decision rule, and that is that a profit-maximizing businessman acting in the interest of his stockholders should not invest in new plant and equipment unless the rate of return which he expects over the long run planning horizon exceeds what he expects to be the cost of capital. Higher inflation has significantly increased the cost of capital to business. As a result of increased inflation, investors in both stocks and bonds have forced interest rates and the cost of equity capital to much higher levels. For example, today if you are a top quality company, to raise debt capital you have to pay about a 9-percent rate of interest. If you want to

successfully issue new equity, you have to do it at a price earning ratio of about 8½ times. Our work indicates that at an 8½ PE, the cost of equity to the company is about 12 percent.

If you turn to chart 7, which is the very last page in the prepared statement, here I believe is the crux of the dilemma as we look out into the future; the rate of inflation has been built into the cost of capital to business.

As you can see on chart 7, the cost of capital has moved up dramatically, and this reflects the fact that providers of capital to business are demanding to be compensated for higher uncertainty and higher risk. Meanwhile, the available evidence suggests that the rate of return on total business capital has not risen significantly, despite higher inflation.

Returns on certain types of investments, for example, the investment in homes, have increased. But the evidence suggests that the actual rate of return on the total assets of all nonfinancial corporations, as you can see from the top two lines on chart 7, is now lower than in the mid-1960's.

I also find Mr. Sinai's simulations intriguing. If you look at his estimates of nominal profits of nonfinancial corporations, the DRI model shows they are virtually insensitive to a 2-percentage swing in inflation. Since this model reflects the way the economy has been behaving, this means there is no statistical evidence that rates of return are affected positively by rising inflation; whereas, the evidence is that the cost of capital has been.

Of course, it is not the actual return, but expected return on investment, that is the key in the capital spending decision. It is our strong belief that although expected returns are difficult to estimate, the evidence suggests that businessmen do not now anticipate that higher inflation will necessarily raise the long-run growth in corporate profits or rate of return on investment.

I would point out three pieces of evidence. The weak performance of stock prices in the last 10 years implies that investors do not expect that corporate profit growth will be raised by inflation, basically what the DRI model also implies; second, if you look at recent investors' preference for bonds and stock paying relatively high dividends, it indicates uncertainty about the adequacy of returns to be earned on capital retained and invested by American firms. Third, the experience with wage and price controls from 1971 to 1973 demonstrated to business that incomes policies to control inflation could depress corporate profitability.

If you look at chart 7—although it is not meant to be a complete analysis of the impact of controls on rates of returns in 1972—despite very high capacity utilization and shortages in the products produced by industries, the rate of return was very low, and that low rate of return relative to capacity utilization is evidence suggesting that the wage and price controls in that period did depress profitability. Therefore. I would express a strong argument against Mr. Sinai's recommendation that an "autonomous" reduction in inflation would be preferable for stimulating investment. It is hard to see how you could hold down wages politically without at the same time getting involved in controlling prices. I would submit that the experience in 1972 indi-

cates that a movement in that direction would significantly increase business uncertainty, would be a movement away from Mr. Chambers' comment, "the reemphasis of the rights of private property," and could depress capital spending.

So although on paper an autonomous reduction in inflation may be preferable, I think we have to think through the impact on business against the experience of 1972.

Therefore, higher inflation has been built into the cost of capital, but at this juncture, not into the expected rates of return on investment. Consequently, the spread between the two has narrowed, making investment, particularly on long-lived capital goods, less attractive.

We view the low levels of actual and expected rates of return on investment relative to higher inflation as the major maladjustment to inflation that remains in the U.S. economy. And the failure of rates of return on investment to rise with inflation is an enigma.

How do you explain it? Why hasn't the higher inflation been built into corporate growth and the rate of return on investment?

Many economists argue that it reflects a short-run surplus of capital around the world, and low utilization rates. If that is the case, the problem should cure itself in a free enterprise economy. The low rates of return will hold back investment until capacity utilization rises sufficiently to raise returns, which would then stimulate investment. However, I suspect there also may be something else at work holding down returns. It is possible that Government regulations and additions to cost are overloading the cost side of business and that is a factor holding down returns.

My closing point would be the following:

The free enterprise market correction, if it were to work perfectly in the form of a catchup in rates of return as capacity utilization increases, presents a problem and a dilemma. The effort of business to raise returns on investment may aggravate inflation in the short run and thereby it may further raise the cost of capital. This could put the investment decision in a vicious cycle.

Also, in the past, business has usually been willing to invest before returns actually reached adequate levels, in expectation that they would rise. If they now wait for the actual returns to rise to compensate for higher inflation before beginning investments which take many years to complete, the capacity may not be available in time, given the longer leadtimes required. So even the free market adjustment to this problem, if all we are seeing is evidence of a short-run capital surplus, creates a problem in the size of the price increases that would be necessary to raise returns and also in the timing of the adequate capacity coming on stream.

To mitigate these prospects I have a few policy suggestions. I think economic policymakers should recognize the impact of their actions on both the cost of capital to business and the rate of return on investment. Where possible, action should be taken to reduce the cost of capital to business; and clearly actions should be avoided that hold down the recovery in investment returns as capacity utilization rises.

Reducing inflation and inflation expectations, more favorable tax treatment of savers and investors, would tend to reduce the cost of capital. Expected rates of return could be enhanced by reducing corporate taxes when possible. And there must be a sensitivity to the

problem of not worsening profit expectations when implementing incomes policies.

Tax policies could be used to reduce the size of price increases necessary to bring about a better balance between the rate of return and cost of capital. I might also add that the income distribution effects of raising rates of return through tax reductions are different from raising rates of return through a comparable increase in prices. Viewed in this perspective, corporate tax reduction and reduced taxes on capital gains on equity investment could reduce inflation as well as stimulate investment. Also, tax policies aimed at reducing the cost of capital and raising the rate of return would help assure that adequate capacity would be available when capacity needs increase. Thank you.

[The prepared statement of Mr. Wenglowski follows:]

Prepared Statement of Gary M. Wenglowski

The Fixed Investment Decision

My name is Gary Wenglowski and I reside in Purdys, New York. I have been Director of Economic Research at Goldman, Sachs & Co. for the past 10 years.

I would like to address myself to several questions: Have there been any significant differences observed in business investment behavior in recent years? If so, what are the causes of these anomalies? Specifically, what has been the role of increased inflation expectations and heightened uncertainty? What are the implications for economic policy?

A MICROECONOMIC ANALYSIS OF RECENT INVESTMENT BEHAVIOR

To assess the recent behavior of business investment, I would like to review business capital spending in the latest business cycle in comparison with past business cycles on a microeconomic basis. By observing in what types of investment recent experience has differed the most, it may be easier to determine possible causes. I would like to give credit to my associate, Rosanne Hersh, for the attached charts, data and analysis on capital spending by major types of investment goods.

Business fixed investment totalled $185 billion or about 10% of total GNP last year. However, as shown on table 1, a great variety of equipment and structures is included in business investment. For example, business investment in equipment accounted for 67% of total capital spending in 1977, and within equipment spending, business purchases of automobiles and tracks accounted for about 16% of total fixed investment last year. Business investment in structures represented 33% of 1977 capital spending, and within structures, construction of commercial buildings, such as office buildings, shopping centers, and warehouses, accounted for 8% of total business investment.

TABLE 1.—*Composition of business-fixed investment*

	As a percent of business-fixed investment in 1977
Producers' durable equipment	67
Automobiles and trucks	16
Farm tractors and equipment	5
Other equipment	46
Nonresidential structures	33
Commercial	8
Telephone	2
Utilities excluding telephone	8
Industrial	4
Other construction	11

Business investment in equipment since 1947 is shown on chart 1, where its most recent cyclical behavior is also compared with its average cyclical performance over the past 5 postwar business cycles. In the most recent cycle,

business investment in equipment declined by somewhat more than usual in the 1974–1975 recession; it turned up somewhat later following the 1975 trough in the economy; and it has been increasing a bit more slowly than its historical average performance during the past 2 years. Actually, the difference between this most recent recovery in business investment in equipment and its average recovery appears quite small. The difference may be totally accounted for by: (1) the fact that equipment purchases kept rising for a longer period into the 1974–1975 recession than in earlier downturns, and (2) the steeper drop in capacity utilization in the last recession and the lower than average levels of capacity utilization in the subsequent recovery.

Since we believe that much of the difference in the behavior of business investment in the past 3 years can be attributed to lower capacity utilization in the United States and in foreign economies, the figures on table 2 should be of interest.

TABLE 2.—*U.S. manufacturers' capacity utilization*

	Level	*Changes from Trough*
12 months after economic trough:		
Latest recovery	79.1%	+8.2%
Average recovery	83.9	+9.0
24 months after economic trough:		
Latest recovery	81.2	+10.3
Average recovery	83.9	+9.0

Business investment in structures, which are relatively long-lived capital goods, is shown on chart 2. The difference between spending on structures in the most recent business cycle and that in the average postwar cycle is far greater than the difference observed in business equipment purchases above. The decline in business investment in structures was far steeper than usual in the last recession; the upturn in structures investment took place later than usual following the trough in the economy; and the increases in structures in the last 3 years has been much more moderate than the usual cyclical experience.

Tables 3 and 4 show the kinds of structures in which investment has recently lagged the most. The shortfall from the usual cyclical experience has been most marked in commercial structures, telephone industry structures, and utility industry buildings. Although the recent cyclical experience in industrial plant construction does not appear as weak, this cyclical analysis masks a longer run shortfall in industrial structures which will be shown below.

A brief look at investment patterns in the major types of structures should provide some insights to the causes of the investment lag. The largest discrepancy between recent capital spending and its past average cyclical behavior has occurred in commercial construction. The relative importance of this segment of business investment also makes it the largest single contributor to the total shortfall in investment spending during the latest cycle as shown on table 4.

TABLE 3.—PERCENT DEVIATION IN CURRENT CYCLE FROM AVERAGE CYCLICAL PATTERN, 1974–78: IQ

Period	Commercial structures	Telephone structures	Utility structures [1]	Petroleum pipeline	Industrial structures	Other structures	Total
1974:							
1st	−2.8	2.0	−2.6	46.7	5.0	−1.9	−1.1
2d	−6.3	−5.1	−7.4	−52.3	3.5	−2.9	−3.0
3d	−16.0	−9.5	−16.7	182.0	3.0	−7.1	−8.5
4th	−20.0	−10.9	−20.9	151.0	24.2	−9.4	−9.6
1975:							
1st	−31.5	−14.9	−27.6	170.0	15.5	−11.2	−17.0
2d	−41.9	−23.3	−25.6	282.0	22.7	−11.3	−20.6
3d	−45.0	−26.2	−27.1	344.0	23.8	−9.5	−22.1
4th	−46.1	−27.5	−24.4	397.0	11.3	−10.5	−23.5
1976:							
1st	−47.9	−31.1	−23.8	345.0	18.8	−8.2	−23.6
2d	−44.8	−31.9	−27.3	517.0	2.9	−8.4	−24.1
3d	−43.2	−32.8	−23.9	547.0	4.3	−8.1	−23.8
4th	−44.9	−33.0	−21.3	428.0	−3.0	−7.5	−24.4
1977:							
1st	−47.8	−35.0	−14.7	221.0	−15.6	−6.4	−26.5
2d	−44.7	−34.3	−12.7	268.0	−12.1	−8.1	−24.3
3d	−39.5	−34.8	−14.9	144.0	−8.7	−7.3	−23.1
4th	−42.3	−35.1	−14.1	62.0	−10.7	−2.9	−23.4
1978: 1st preliminary	−44.0	−32.5	−6.5	73.3	−14.2	−8.1	−24.3

[1] Excluding telephone structures and petroleum pipeline.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, and Goldman Sachs' calculations.

TABLE 4.—PERCENTAGE POINT CONTRIBUTION TO TOTAL DEVIATION IN CURRENT CYCLE FROM AVERAGE CYCLICAL PATTERN, 1974–78: IQ

Period	Commercial structures	Telephone structures	Utility structures[1]	Petroleum pipeline	Industrial structures	Other structures	Total deviation
1974:							
1st	−1.3	+0.1	−0.8	−0.4	+1.1	−0.8	−1.1
2d	−1.5	−.3	−1.2	+.2	+.4	−.6	−3.0
3d	−4.4	−.7	−3.0	+.9	+.4	−1.7	−8.5
4th	−6.5	−1.0	−4.4	+.8	+4.4	−2.9	−9.6
1975:							
1st	−9.6	−1.4	−5.8	+.7	+2.7	−3.6	−17.0
2d	−13.8	−2.4	−6.6	+1.8	+4.9	−4.5	−20.6
3d	−16.1	−2.7	−7.3	+2.4	+5.8	−4.2	−22.1
4th	−15.5	−2.6	−6.3	+2.9	+2.4	−4.4	−23.5
1976:							
1st	−16.9	−3.0	−6.5	+2.5	+4.0	−3.7	−23.6
2d	−14.8	−2.8	−6.9	+3.3	+.5	−3.4	−24.1
3d	−15.7	−3.2	−6.6	+4.4	+.8	−3.5	−23.8
4th	−15.2	−3.1	−5.8	+3.3	−.5	−3.1	−24.4
1977:							
1st	−15.7	−3.1	−4.4	+1.8	−2.5	−2.6	−26.5
2d	−14.6	−3.0	−3.6	+2.2	−2.0	−3.3	−24.3
3d	−13.2	−2.9	−3.9	+1.0	−1.4	−2.7	−23.1
4th	−14.1	−3.0	−3.8	+.4	−1.7	−1.2	−23.4
1978: 1st preliminary	−14.6	−2.9	−1.9	+.6	−2.4	−3.1	−24.3

[1] Excluding telephone structures and petroleum pipeline.

Source: Goldman Sachs' calculations.

Commercial construction is shown on chart 3. The decline in the last recession was extremely sharp and the recovery has been relatively mild so far, with the latest volume of commercial construction still running close to 30% below its 1973 cyclical peak.

As for the causes, there is a general view that commercial overbuilding in 1972 and 1973 may have contributed to the sharp decline and weak recovery. However, the real volume of commercial construction does not appear to be that much above its trend in the early 1970's to account for all of the recent sluggishness. Discussions with commercial developers indicate that meeting new environmental regulations has added significantly to the time needed to complete projects, and this may account for the longer lag between the latest upturn in the economy and the increase in commercial construction. Also, much of commercial construction, particularly shopping centers, follows on the heels of new housing developments. The most recent upturn in housing began later in the business cycle than in the past, providing another cause of the delayed recovery in commercial construction.

However a strong recovery may now be underway in commercial investment. Cash flows in the retail and wholesale sector and new home building are both at high levels relative to the current volume of commercial capital spending.

Telephone industry investment in structures experienced the second largest shortfall from the usual cyclical experience during the past 3 years. This category of investment is shown on chart 4. Investment in these structures was far above trend in the 1969 to 1974 period. Therefore, some of the recent weakness may be in reaction to those high spending levels. Also, there appears to have been a slowdown in the trend rate of increase in demand for telephone service that this industry expects.

Similar causes may be behind the recent relative weakness in gas and electric utility construction, shown on chart 5. Very large spending gains occurred in the second half of the 1960's and the energy crisis has reduced expected growth for electricity.

Construction of industrial buildings or plants accounts for approximately 4% of total business investment. It is shown on chart 6. Comparing its recent behavior with the experience of past cycles reveals only a small difference in cyclical patterns—the most recent upturn has been somewhat later relative to the business cycle trough and somewhat more moderately paced. Nevertheless, the longer run weakness in industrial plant construction is striking. The real volume of industrial building is now no higher than it was 20 years ago. However, the utilization rate of existing plants has also been relatively low, and the recent low volume of industrial plant building is about the same as it was in the past at comparably low utilization rates (e.g., late 1971-early 1972, 1961–1962).

Summarizing, this detailed review of business investment behavior indicates that capital spending declined more sharply during the last recession and is re-

covering later and less rapidly than usual. The anomaly is largest in investment in structures, the so-called long-lived items. Several causes lie behind this recent experience:

(1) The last recession was deeper than the average and capacity utilization rates during the subsequent recovery were lower.

(2) More stringent environmental regulations have added to the time between the investment decision and investment spending.

(3) Some commercial overbuilding in 1971 and 1972 and above trend investment in 1965–1970 in the utility sector met some of the needs for the future.

(4) A slowing in expected long-run demand growth has reduced expected capacity needs in some industries.

In addition to these specific causes, there is evidence to support the view that a more general consideration is also holding back investment in long-lived capital assets such as plant. Many of the specific causes enumerated above should have weakened both investment in structures and equipment, but the fact remains that investment in structures has been much weaker than business spending on equipment. The general depressing influence of higher inflation and the related, greater uncertainty may be the cause of this general reticence to invest in plant. But we would emphasize that it is only one among several causes of the recent relatively weak recovery in capital spending.

THE IMPACT OF HIGHER INFLATION ON THE INVESTMENT DECISION

The impact of increased inflation on the capital spending decision may be analyzed by its impact on the capital budgeting criterion: invest in new plant and equipment only if the rate of return on investment exceeds the cost of capital.

Higher inflation has increased the cost of capital to business, or the minimum rate of return required to undertake a new investment. As a result of increased inflation, investors in stocks and bonds have forced interest rates and the expected total return on common stocks higher. For example, to successfully issue corporate bonds today, a top quality company must pay almost a 9% interest rate. To successfully issue new equity, companies would have to price their shares at a price-earnings ratio of about 8.5 times. At a P-E ratio of 8.5 the cost of equity capital would be 12½%.

These interest rates and returns to stockholders are higher today because of inflation. The impact of higher debt and equity costs on the average cost of capital is shown on chart 7. Since 1972, the cost of capital has moved up very sharply. Declining price-earnings ratios to compensate equity investors for higher inflation and uncertainty have been the major cause.

Meanwhile, the available evidence suggests that the rate of return on total business capital has *not* risen significantly despite higher inflation. Indeed, returns on other kinds of investment—e.g., homes—have increased. However, the actual rate of return on the total assets of all nonfinancial corporations is now lower than in the mid-1960's, as shown on chart 7.

Of course, it is not actual returns but *expected* returns on investment that are important in the capital spending decision. Expected returns are difficult to estimate, but the evidence suggests that businessmen do not now anticipate that higher inflation will necessarily raise the long run growth in corporate profits or the rates of return on investment. The weak performance of stock prices during the past ten years of escalating inflation implies that investors do not now expect corporate profit growth to be raised by inflation. Investors' recent increased preference for bonds and for stocks paying relatively large dividends indicates great uncertainty about the adequacy of returns to be earned on the capital retained and invested by American companies. Finally, the experience with price and wage controls in 1971–1973 showed that incomes policies to control inflation could depress corporate profitability.

Therefore, higher inflation has been built into the cost of capital, but not into expected returns on investment. Consequently, the spread between the two has narrowed, making investment, particularly on long-lived capital goods, less attractive.

Moreover, higher inflation has also been accompanied by increased business cycle uncertainty because of the severe recession experienced in 1974–1975. Increased uncertainty encourages capital spending decisionmakers to require a wider than normal spread between expected returns on investment and the cost of capital, at the very time when the spreads have narrowed.

We view the low levels of actual and expected rates of return on investment relative to higher inflation as a major maladjustment in the U.S. economy. The failure of rates of return on investment to rise with inflation is both an enigma

and a dilemma. It may be just another manifestation of a short-run excess of productive capacity in the world, reflected in low capacity utilization rates. If so, the problem should cure itself in a free enterprise economy. The low rates of return should hold back investment until capacity utilization rises sufficiently to raise returns, which would stimulate investment. But, other factors, not yet clear to us, may also be at work in holding down returns.

POLICY SUGGESTIONS

Even the free enterprise, market correction in the form of a catch-up in rates of return presents a problem. The effort by business to raise returns on investment may aggravate inflation in the short-run and, thereby, further raise the cost of capital. This would put the investment decision in the grasp of a vicious cycle.

To mitigate these prospects, economic policymakers should consider the impact of their actions on both the cost of capital to business and the rate of return on investment. Where possible, they should take actions to reduce the cost of capital to business and avoid actions that would hold down the recovery in investment returns. Reducing inflation and inflation expectations and the more favorable tax treatment of savers and investors would reduce the cost of capital to business. Expected rates of return would be enhanced by corporate tax reduction when possible and by a sensitivity to the problem of not worsening profit expectations when implementing an income policy. Tax policy, therefore, could be used to reduce the size of the price increases necessary to bring about a better balance between the rate of return and the cost of capital. Viewed from this perspective, corporate tax reduction and reduced taxes on capital gains on equity investments could reduce inflation as well as stimulate investment.

CHART 1

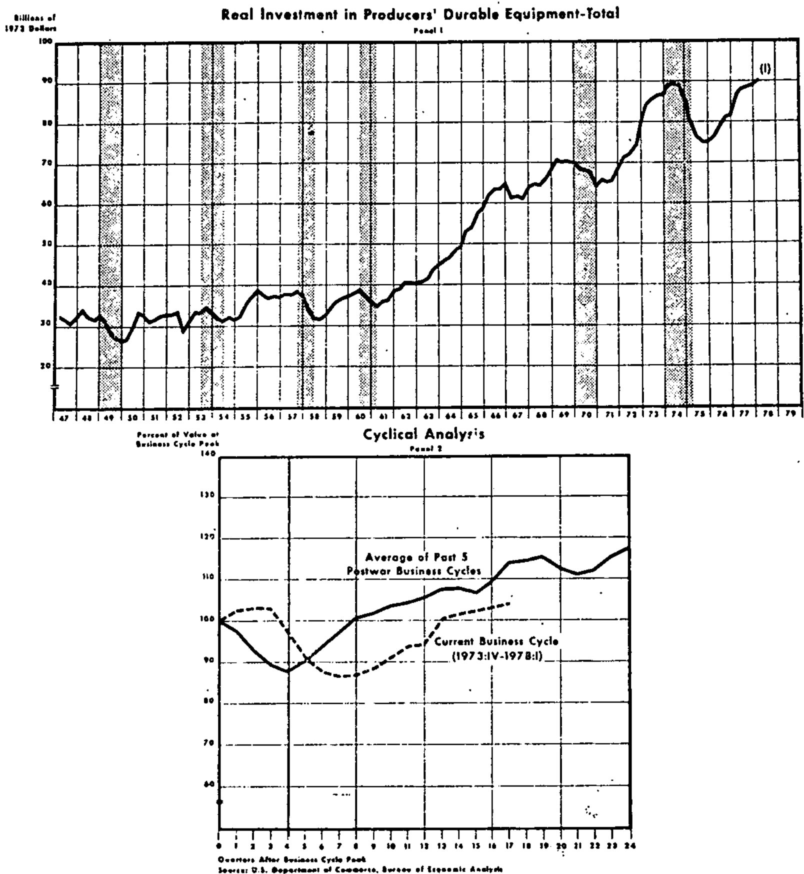
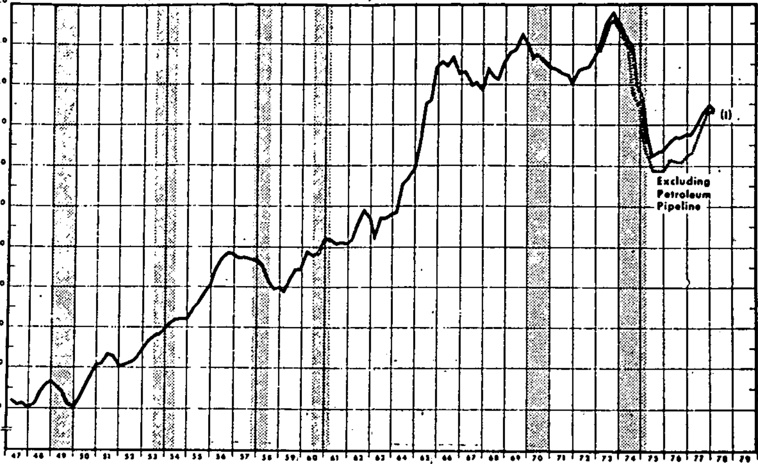


CHART 2

Real Investment in Nonresidential Structures

Panel 1



Cyclical Analysis

Panel 2

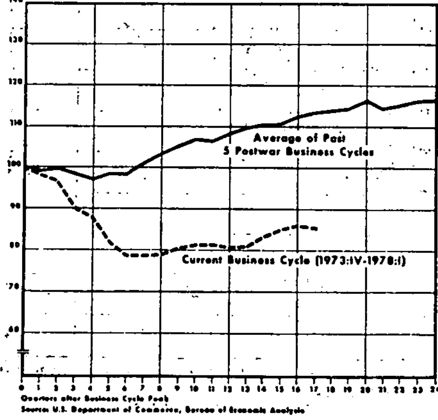


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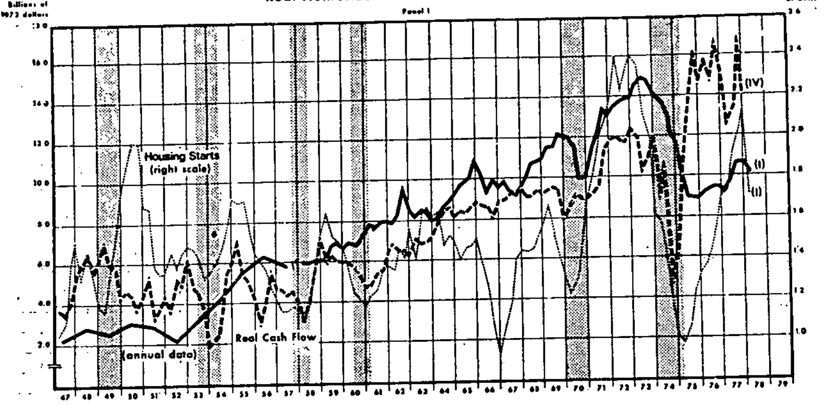
Chart 3



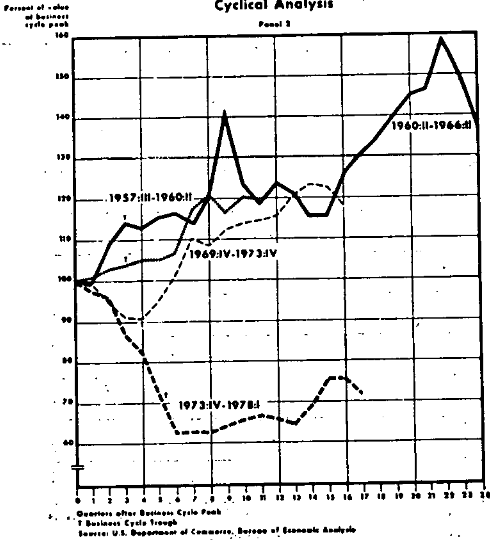
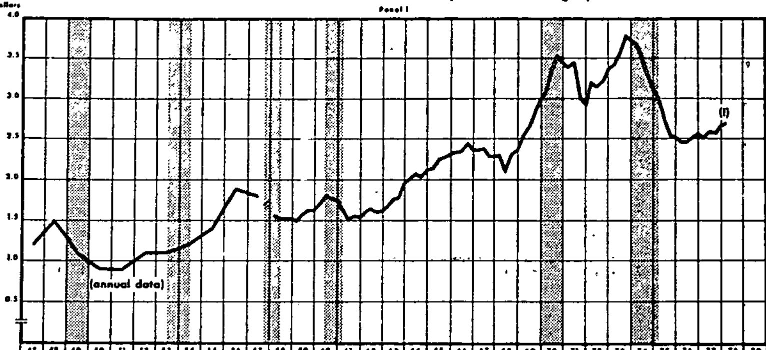


CHART 4



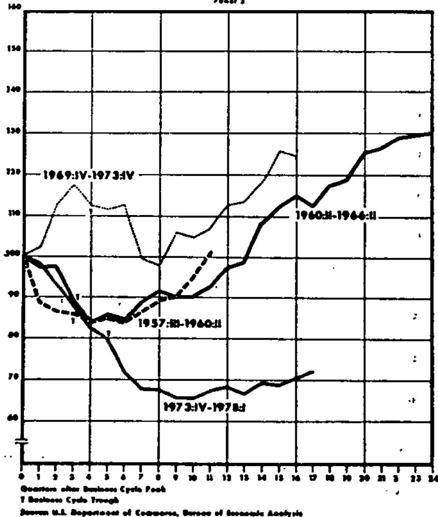
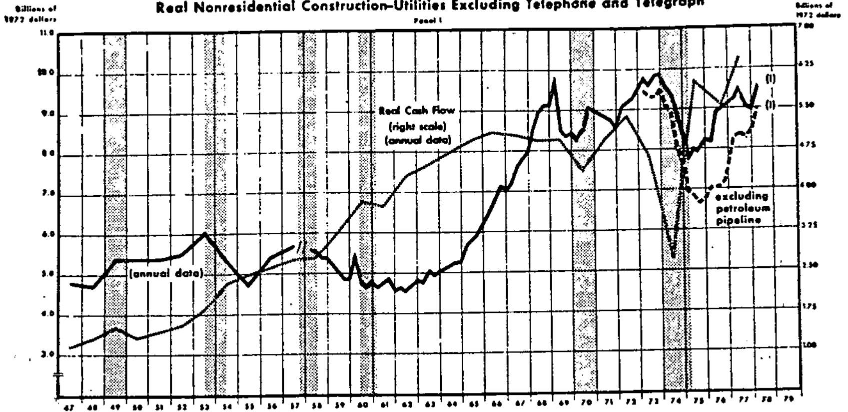
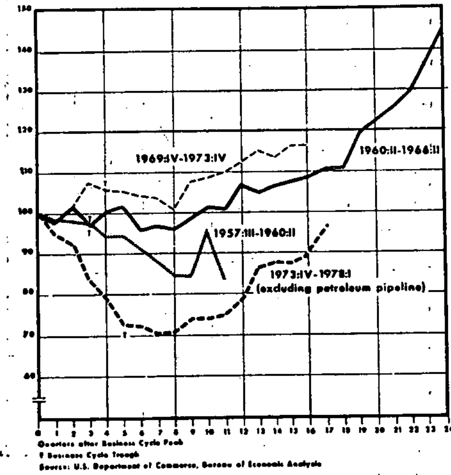


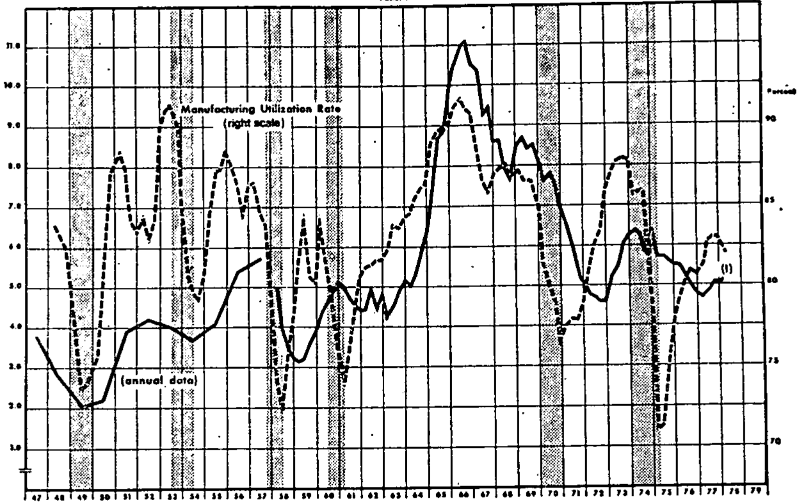
CHART 5

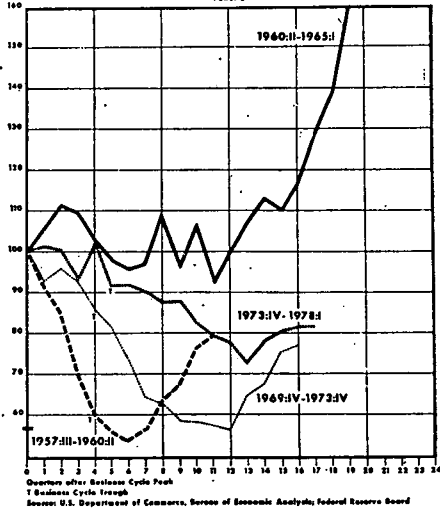




Quarters after Business Cycle Peak
T Business Cycle Trough
Source: U.S. Department of Commerce, Bureau of Economic Analysis

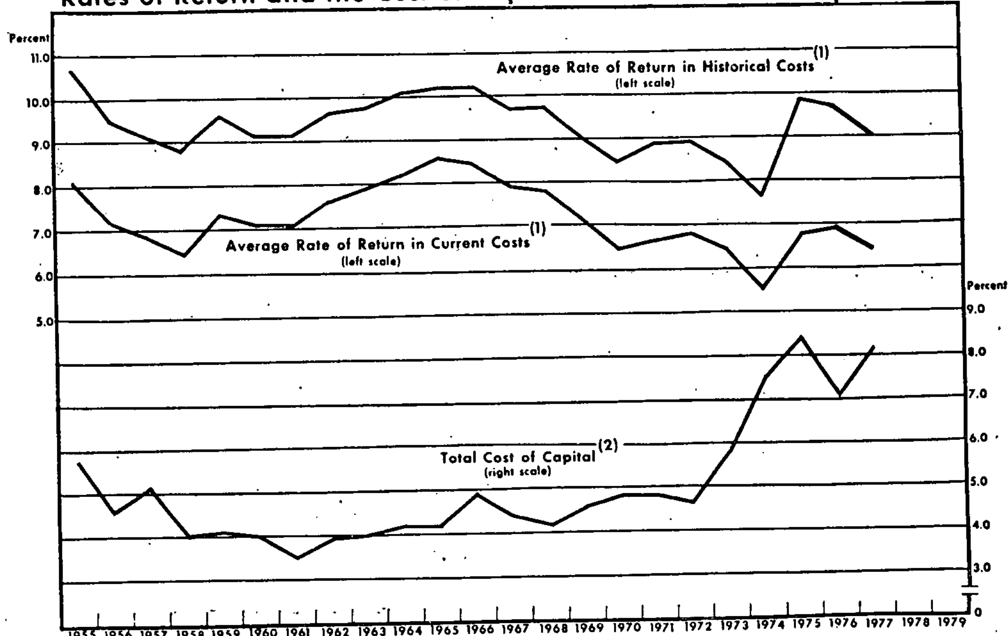
Chart 6





Quarters after Business Cycle Peak
T Business Cycle Trough
Source: U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board

Rates of Return and the Cost of Capital for Nonfinancial Corporations



(1) After-tax profits (excluding inventory profits and deficient depreciation) plus gross interest paid divided by total assets of all nonfinancial corporations, all in historical costs or current costs. Return is normalized to average capacity utilization.

(2) Equity earnings-price ratio, Aaa bond rate, prime bank rate weighted by equity portion of financing, bond portion, and short-term debt portion, respectively. Bond and prime rate multiplied by 1.0 minus the corporate effective tax rate.

Sources: U.S. Department of Commerce; Board of Governors of the Federal Reserve System; Standard & Poor's Corp.; Moody's Investors Service, Inc.

CHART 7

Mr. SHELDON. Thank you, Mr. Wenglowski.

Well, I think we have the makings of a good discussion. We have sufficient variety of views and some differences in terms of major focus and emphasis so that the three sets of statements are complementary and in some places the views are in conflict.

Mr. HENDERSON. I would like to ask Mr. Sinai a question about a thoughtful study he authored with Roger Brinner, captioned "Capital Shortage: Near-Term Outlook and Long-Term Prospects"; the conclusion was a guarded one, that capital shortage, which was then in 1975 a hot item of public discussion, was something that with care and good policy could be regarded as manageable.

In the interval the conditions of inflation have not really improved. The costs of raising capital have increased. How would you reassess the prospect? Is the flow of savings going to be adequate, given the fact that these disadvantages have come upon us in the last 3 years?

Mr. SINAI. As I look at the evolution of the economy over the last few years, there is a mixed picture with regard to the capital shortage.

On the policy side, we really have had a tendency toward, in the broad view, a more restrictive fiscal policy and somewhat probably easier monetary policy in the monetary aggregate sense than one would have thought, and that was one of the conditions for avoiding capital shortage.

We have had a fairly steady growth in the economy with no real imbalances or boom conditions. That was another condition for the development. This was true up until the second quarter of this year.

The one condition that is failing over the last 5 or 6 months is the problem of inflation. The study said that a condition for avoiding a severe capital shortage would be that inflation should remain stable, whether that is 4, 5, or 6 percent. Inflation had to remain stable. We are going through a period where there is some doubt and question, and as a result, the difficulties of having the savings that match investment needs are temporarily in question, I think.

Also in that study we did talk about a period of trouble in 1978, a little cyclical problem in 1978; and I would prefer to think that that is what we are now going through and would adhere to the basic thesis, which is that we are OK in the overall capital problem until 1980 or 1981. And I still see in the making policy responses that will tend to limit the inflation and the potential negative impacts on the capital shortage. The difficult cause, which is the inflation, if anything will make us have a severe capital shortage. This would be a resurgence of inflation. But as you look at what is going on, we have lots of feedback mechanisms acting to limit the current surge, and I think they will prevail and I still feel that we will not have another shortage until the early 1980's.

Mr. HENDERSON. I would like to ask Mr. Chambers if my impression is correct that the impact of regulations is as acute as that of inflation itself? That was the impression I gained from your prepared statement, and I wondered whether, indeed, the problems of uncertainty introduced by inflation were not still the major deterrent to vigorous investment in long-term capital.

Mr. CHAMBERS. My experience in trying to propose projects to people who are in charge of making the money decisions as to whether to invest in them, if you are talking about real long-term projects,

say 15 years, is that there is some feeling that inflation is going to wash out one way or the other.

Now, I think Mr. Wenglowski is right, that it is not working out the way you would like to see it. Rates of return have not come up and perhaps inflation is causing that, and it is a worry. But it is plain hard to predict 15 years in advance what is going to happen, and so in general, the way inflation is taken into account is that the project has to clear a higher hurdle rate. You have to show a higher rate of return in a long-term project than in a very short-term project, and that is the sort of way you would account for inflation.

The higher return opens the subject, but now we run into a go, no go kind of question which says suppose we have a Barnwell situation. I do not know if you are familiar with that plant, but you know there are a number of these individual specific examples around that people worry about and in that case, people have invested several hundred million dollars in a plant that is not permitted to do anything.

At the time that plant was started, as far as I know, it was extensively approved and met every requirement that anybody could think of. But bythe time the plant is completed it cannot be run because the requirements have changed.

Now, how do you show that a given investment is not in jeopardy of being canceled out like that by some change in the regulation, say, over a 15-year period? There have been changes over the last 15 years. At the moment people think there will be still more over the next 15 years.

Representative BOLLING [presiding]. What kind of changes? Excuse me for interrupting, but changes of reduction in number of regulations or a great many more regulations? I am trying to get the degree to which business is frightened by what Government has already done and what it might do.

Mr. CHAMBERS. Predominantly, I think it is the increase in regulations, not reduction. Reduction might be a problem in a few isolated cases, but in many cases it is not only the increase in regulations, but the fact that the new regulations seem to be much more severe than in the past.

Representative BOLLING. And business, in your opinion is expecting, in the next 15 years, to see more of an increase?

Mr. CHAMBERS. They are very much worried about that.

Representative BOLLING. Does everybody agree with that? Would you agree that is the view from that perspective: Business feels that it is going to get more and more regulated?

Mr. SINAI. I am in the business world as well as in the academic world. If you are trying to plan 4 or 5 years ahead, I would expect it to go on, and to plan for that, certainly the risk of the return on investment would be much greater because of the uncertainty.

Representative BOLLING. I am trying to find out how general that view would be, that would be the approach. I have been told that everybody predicted the future from the present and from recent past experiences, and I have not always believed that. But I was curious to see if we could get a general agreement that business felt it was going to get worse, not stay the same or get better from their point of view. I take it that the feeling might be that it will get worse.

Having interrupted, I will get out of it again in a minute, but I want to make my apology to you for my absence in the beginning. But since you have started here I have managed to pass a controversial rule on a controversial matter in another committee in which I serve, so I have not been completely idle. I will now defer to Mr. Wallace.

Mr. WALLACE. For the record, the staff has seen private business projections which indicate very much toughening of regulations, tougher environmental standards and safety requirements, tougher work rules, and so forth.

They have incorporated that into their private projections.

Representative BOLLING. Thank you, that is helpful.

Mr. HENDERSON. Mr. Wenglowski concluded with the thought that there was an enigma about poor returns. I wonder to what extent some part of the explanation of that situation in the 1970's may be due to the manner in which the international economy has placed the United States at a relative disadvantage.

Mr. WENGLOWSKI. I think there is evidence that that is playing a role.

If you look at the behavior of profit margins in the United States in the past 12 to 15 months, when our trade deficit was rising significantly, there was a significant depression in margins. I think this was focused mainly in companies producing commodities that are traded on international markets. Capacity utilization outside of the United States is generally lower than in the United States, and that is probably one of the reasons holding down returns here.

Mr. HENDERSON. My question really is: Are we waiting also on the rest of the world to reach a stage of recovery that is as respectable as that of the United States between 1975——

Mr. WENGLOWSKI. Waiting? Is capital investment waiting?

Mr. HENDERSON. The improvement from the rate of return on capital, would it be likely to follow an improvement in the world economy?

Mr. WENGLOWSKI. It should. As utilization rates rise, I would expect that returns should rise at that point. The problem is the dilemma I mentioned. The prospect of those returns going up will add to inflation; and second, business has normally been willing to invest before they saw returns go up. If they start investing at 90-percent utilization rates, the capacity will not be there in time. So even though that model does explain what is going on and forecasts the future, there are still problems in the resolution.

Mr. HENDERSON. I think I detected a difference of opinion between Mr. Wenglowski and Mr. Sinai on the manner in which tax measures could be used to improve capital investment; in particular, the difference between investment tax credit and the lowering of the rate on corporate income tax.

Mr. WENGLOWSKI. No, I do not think that was accurate. I basically raised the question that in considering tax changes one should keep in mind the rate of return. Certainly the investment tax credit would benefit the rate of return as would a reduction in the corporate tax rate.

Mr. HENDERSON. But would it benefit the kind of capital investment you see as being deficient in this particular case?

Mr. WENGLOWSKI. Since the ITC is tied to investment decisions, the

argument is that it may be more effective than a reduction in the corporate tax rate.

Representative BOLLING. May I interject how much more I believe—as an amateur I tried to understand the economy and its behavior—I am coming more and more to be impressed by the effects of psychology. Is there any way to quantify what percentage of the decisionmaking in a board room is based on specific factual material and what is based on other considerations.

I am quite serious about this, because you can see many occasions in this country where the psychology of the people generally has made all the difference as to what happened. They are not making decisions with all the advantages that presumably even a moderately advised business has in terms of accumulation of factual material. Factual material surely plays a larger role than 50 years ago because of the number of experts, economists, engineers, and technicians, who have an input in corporate decisions. But is it unfair to ask you to evaluate how significant the percentage is; not in absolute terms, but in general terms? Are decisions based on fact or are they based on inclinations?

Mr. CHAMBERS. I would like to comment on that. If you have a fairly short-run decision in an area that the company knows quite a bit about and feels comfortable in, then I think the decisions are pretty clearly numerical ones, based on the normal financial balances and whatever the approach to financial decisionmaking is. But if you begin to get out of that area, either by projecting yourself into longer term areas or by projecting into other areas of business which are not perhaps as familiar or are new areas of business—maybe areas that nobody is in right now; for instance, a new way to desalinate seawater—then I think that the psychology becomes the predominant factor.

Now you have to show the financial returns in order to get the subject brought up. If it does not have a financial return——

Representative BOLLING. Right.

Mr. CHAMBERS [continuing]. Such as your familiar business, you will not get in the door. But once you are in there and everybody realizes that you may or may not be right on these projections, then the problem is what are the unknowns. And it is not only the things that Mr. Wallace is talking about; namely, the facts that we expect more regulations of the sort that we already know about; but we sit there and wonder about what new sources they will come up with that we do not know about. For instance, would you have predicted that in 15 years you would have no-growth areas in California where they plain do not want growth? I do not think we could have expected that 15 years ago.

Representative BOLLING. Well, then, to follow up on your basic question, Mr. Henderson, what are the factual arguments in this conflict between one type of tax cut and another type? What are the advantages and disadvantages of investment tax credits?

Our distinguished colleague, Senator Javits, is coming; we will make room for you; we welcome you.

Mr. SINAI. There are three kinds of tax stimuli that have most often been talked about in studies. They fall into the categories of direct reductions in corporate profit taxes, specific investment tax credits, and they have also been in equipment, but more recently a proposal to institute tax credits for spending as well; and the other measures

have been designed to accelerate the depreciation writeoffs in the tax savings that flow from that.

Any method for accelerating depreciation and the investment tax credits very specifically are tied to the investment spending. The lowering of corporate profit is a kind of generalized purchasing power benefit to corporations, and in terms of specific effect on investment is somewhat devised to project the higher profit. That flow from corporate tax reductions could be used to hire labor, accumulate financial assets, or buy plant and equipment. However, the change in the investment tax credits specifically changes the cost, the price, or equipment and could change the price of plants, the effective costs of plants, and that change in relative prices would stimulate spending in that direction. That is also true with regard to depreciation measures; that tax savings from accelerated depreciation lowers the effects of costs of capital goods and changes the relative prices of capital goods.

The depreciation effect also has some generalized purchasing power effect as well, and that is the one that our studies have come down on as the measure that would have the greatest bang for a buck of lost taxes on business spending alone. The investment tax credits rate second, and corporate tax reductions rank third.

I might get back to Mr. Wenglowski's chart and some of my own charts. When we look at the rate of return on investments, that after tax rate of return adjusted for inflation effects, which have been dropping, one reason is that the tax system has not caught up to the inflation effect of replacement costs, expenditures for plants and equipment. We have had offsets to the private sector for the inflation drag, the inflation effect on raising taxes, by raising exemptions, et cetera. But there have not been an equivalent number of adjustments in corporate taxation to prevent a drag on corporate spending, and the depreciation allowance is the obvious one.

The lifetime is shorter, however, when you go buy the new equipment, and it is two-thirds of the total capital spending. When you buy that with an average lifetime of 3 to 8 or 9 years, you buy it at higher prices, going 5 to 7 percent more a year, and you do not get any kind of tax savings. So as we rank them we get the benefits of accelerated depreciation on plant equipment alone, forgetting the others.

Mr. Wenglowski. I would maybe add one thing to that. Following on Mr. Chamber's comment that psychology is very important in the 15-year, longrun capital spending decision, the question as to which tax change would have the biggest effect might be determined by which has the most favorable impact on business psychology. A tax rate reduction may seem more permanent than an increase in the investment tax credit. Therefore, why shouldn't it have more impact? It is possible that the ITC, which has been changed so often, might be viewed by business as a relatively shortrun kind of change. A reduction in the tax rate might be viewed as more of a watershed and, thereby, have a greater effect on psychology looking out 10 to 15 years. The comments on accelerated depreciation I would agree with.

Senator Javits. You would agree they are entitled to first priority?

Mr. Wenglowski. The accelerated depreciation question?

Senator Javits. Yes.

Mr. Wenglowski. Yes.

Senator JAVITS. Two things are very interesting: First, in the tax bill of which I am a coauthor with Senator Danforth, accelerated depreciation is featured as the No. 1 priority; and second, I had the privilege last night of talking at length with four of the heads of the largest independent enterprises in this country, perhaps in the world, and they were unanimous on this point: An adequate depreciation policy is the most meaningful stimulant to capital investment. I think it is very interesting that your views absolutely coincide.

Mr. SINAI. But that is not in the administration bill. I believe they bypassed that.

Senator JAVITS. Businessmen went political. They think other people will suspect that we are buttering them up, but as far as business is concerned, we want to butter them up; otherwise, when things are bad, they will not be able to pay taxes.

Mr. SINAI. I think with that view, which has been prevalent on and off for a number of years, the pendulum may have swung too far; and as you look at households and business and the trend in what we have done taxwise, although there have been benefits to business, the business tax payments have not been indexed as much to inflation as have been the household, and that is worth checking with regard to the rate of return calculations. I would offer that as one reason for the remaining low rate of return. This is the enigma you raised, the low rate of return over the last 5 or 6 years, and I think it may have been carried too far.

Senator JAVITS. You gentlemen should know that this committee has undertaken a study of the obsolescence of the American industrial machine. One of the consequences is the lack of an adequate, precautionary policy. Congressman Bolling and I instinctively feel that it has gotten out of date and is getting poorer every day. Last night one of the participants said that the same thing is true of research and development. The U.S. effort in R. & D. is slipping way behind other countries, and we have an alarming national situation. I can assure you of one thing: I am listening with great interest. This will be debated on the floor of the Senate in action with the tax bill. We may not win, but we will educate the country.

Mr. CHAMBERS. I wanted to second what Mr. Wenglowski and Senator Javits were saying; basically that it is very clear that the investment tax credit is an immediate impetus to investment. But I think in terms of the longer range investment, that somewhere along the line you have got to have a higher rate of return in order to get the machine going again. Either a lower tax or a higher depreciation is a way of doing that which avoids a problem I think is in the psychology of a lot of businesses; namely, that in spite of inflation people do not expect and will not stand politically for business making a higher profit. Perhaps businesses cannot make a higher profit before taxes, but if it can make a higher profit after taxes, let us say, by lowering the tax rate, that does just as much good.

Mr. WALLACE. Last week we had Michael Evans of Chase Econometrics, who had figures on the impact of tax incentives for investment. After tax investment credits were put in there was an immediate jump in investment the following year, but after that investment fell back down. So it would appear from recent experience that while the investment credit has an immediate impact, it does not have a lasting impact.

Mr. SINAI. I guess I would probably have to disagree somewhat with that. I have not seen the gentleman's figures, but coming at it in a different approach and studying how long it takes, the findings or the research on it suggests that there are fairly long lags in response to changes in investment tax credits before you begin to get the payoff.

With regard to the performance, no one way has probably gone out long enough to know. Investment tax credits have turned out to be a permanent feature of the tax law and I do not think there is anything in policymaking that suggests it will not stay permanent. So changing the tax credit ought not to upset anybody. I think businessmen can now take tax credits as a permanent feature of the environment after soem 15 years now except for 2, of the raising of the tax credits.

Mr. BRADFORD. I would like to have Mr. Chambers answer. You really have two effects from regulations, it seems to me. One is that you would stimulate more investments by the pollution and other controls required and therefore they have got to adjust their plants. On the other hand, you have the negative effects of the regulation which you cited in your testimony. I take it you would say that the negative effects far outweigh the direct effects of investment?

Mr. CHAMBERS. I do not mean to focus on pollution. I do not think that necessarily is one of the worst ones.

Mr. BRADFORD. Which is more important in the negative effects from regulations? Is it the actual regulation itself or the administrative bungling and uncertainty that that it gives rise to?

I think of the situation in New Hampshire, the Seabrook nuclear situation, where they thought they had approval and then the EPA administrator changed his mind. They did not have it and had sunk $140 million into their investment to meet their regulatory requirements, then they changed their minds, and I do not know whether that thing will come off or not. But the back and forth bickering of the Government administrators fighting with each other has caused a lot of trouble.

Mr. CHAMBERS. Let me comment on that. First of all there are a lot of poorly drawn regulations which do a lot of damage, and we would hope the regulators would be very sensitive to problems when they are pointed out; however, on the average I am assuming that in most cases the regulation is probably justified. There may be room for argument, but if it is in fact justified to have the regulation, then you have to say the regulation itself is not the problem.

But I think that the predominant problem is that we do not know what is going to be next and we do not know when we are going to get ourselves halfway through a project and get into a regulation tangle we never thought of or had any basis for thinking of.

Mr. BRADFORD. And that is causing business to hold back?

Mr. CHAMBERS. In my experience, yes.

Representative BOLLING. Any other questions?

Mr. ATKINSON. I would like to get into one area that Mr. Wenglowski commented on, and I guess both Mr. Sinai and Mr. Chambers may want to respond as well. Perhaps Mr. Wenglowski can clarify for me what could have been a misreading on my part. He talked about the substantial increases which occurred in the costs of capital, both debt and equity, that were acting as a significant deterrent to investment

spending. Yet most of the literature suggests that during a period of rapid inflation we should expect the nominal cost of debt and equity to rise but that cost can reasonably to expected to be captured in terms of future increases in product prices. So basically what impact from a real cost point of view are we talking about?

Mr. WENGLOWSKI. The question as you phrase it is do people believe and does the evidence support the view that the higher costs of capital which result from higher inflation will also raise the rate of return on capital. In theory, I think they should. The inflation premium built into the cost of capital should get reflected in the rate of return. But all the evidence says that up until this point, this has not happened. Our charts show it and I think Mr. Sinai's profit estimates confirm it. There is no tendency for higher inflation to be built into higher profits. You might say that is the recent history, but business expects that to change in the future, and it is the expectation that affects the capital spending decision. But look at the way that the stock market is behaving. Also, I would say my perception of what business feels is that they are not sure higher inflation will be built into rates of return. I think the experience with controls in 1972 has been a significant factor in raising that uncertainty. So I think the available evidence up to this point says that the competitive result has not yet occurred in the sense of the higher inflation positively affecting profits.

Mr. ATKINSON. Dos that largely result from the fact that it is not built into the returns? Is it largely the result of the way in which our tax system functions and the treatment that it accords to depreciations, and the impact of inflation on the nominal after-tax profits of businesses? Is this something we can ultimately correct to the extent that we may be forced to live with a higher rate of inflation? Is this something we can correct through various tax measures so that the after-tax rate of return is protected in real terms?

Mr. WENGLOWSKI. Yes. I called it an enigma as to why this has occurred and why we have not gotten higher returns. On the top of the list of the reasons why is we do have a short-run surplus of capacity around the world that is holding down returns. But, I think there are other causes, Government regulation, for example, which has added significantly to the cost side of business.

The point Mr. Sinai raised about a lack of indexing of taxes in the corporate sector; the inadequate depreciation measures; the real tax rate on real profits going up; those may be factors. I think it is a problem that can be helped by tax policy. An interesting point is that if we stay at this rate of inflation, ultimately the rate of return has to go up. And there is a big difference in income distribution effects of raising returns by only adjusting prices as opposed to doing some of it by corporate tax reduction. The results of who pays is very different, which is something that could be explored.

Mr. ATKINSON. Even with our current tax system?

Mr. WENGLOWSKI. You are not going to get enough investment, and I'll say prices will have to move up faster to overcome the drag on return in the current tax system.

Mr. SINAI. With regard to the failure of the rate of return to keep up with the costs of capital because it could not be passed on in product prices, there are two reasons for that: One is you have to take account

over the last 10 years of the negative feedback effects on the acceleration of inflation in our economy, so that when prices go up it engenders much less real growth and that eventually with some passage of time comes back to affect corporate profits, to make them worse than what they have been otherwise; and that is a critical element in the return rate in inflation.

The second one has to do with, as you mentioned, the failure of appropriate taxation for accurate economic depreciation. But I do not think we should lose sight of the fact that behind so many of the problems of the economy is an inflation that when it comes from outside like OPEC price increases, poor crops, or whatever, it engenders a very bad performance in the economy on the real and financial side, and it is probably 70 percent of the answer to all of the problems that we are only chipping away at with all those other measures. The answer is to get at that inflation and the causes that are making that happen, and then a lot of the other problems would tend to fall in place.

Mr. ATKINSON. We never got into the differences between Mr. Sinai and Mr. Wenglowski on the whole issue of autonomous wage reduction as having been the driving forces for generating this lower inflation scenario, and what I want to do is direct the question to Mr. Sinai, to ask whether a program such as TIP, on the basis of the experiments which might have been performed with the DRI model, could, in fact, lower significantly the rate of inflation in order to obtain the kind of gains that you allege we could obtain?

Mr. SINAI. Let me first say that the lower wage inflation lever is one measure to autonomously reduce the rate of inflation. What is interesting is the results that flow from that—not so much the fact that wages were lower; to do that we could have cut oil prices by four times, the reverse of what happened in 1973. But we have gotten very much the same beneficial affects on all of the variables that were measured.

With regard to TIP, we have not run that program through our computer, but in thinking about the framework of the model, it is undoubtedly true that suppose we take a variation of TIP, which is to pay employees in the form of tax credits for accepting lower wage increases, the so-called carrot approach. The rate of wage increases would go down, the Government would lose some money because we were paying out taxes and the debt would go up and we would have negative factors, higher interest rates and the like, but the effects of lower wages would flow to lower prices and stimulative effects on interest rates would be very beneficial. So I think the net outcome of that would certainly be something grossly like you see in the simulation, generally quite beneficial. It is conceivable that the economy could be strong enough from that type of policy to generate sufficient tax revenues to actually pay for the subsidies that the Government would have to lay out to get people to accept lower wage increases.

Now I am not an expert in TIP. I know it is loaded with all kinds of administrative difficulties. It almost sounds like an academic concoction that will never work in practice. All I would say is that we ought to be thinking in those directions, in directions of lowering the wage cost bill but somehow not allowing the living standard and the real purchasing power of the household sector to deteriorate as a means

to get at some of the problems of the economy and capital formation.

Mr. BRADFORD. Would it take as much administrative machinery as wage controls themselves?

Mr. SINAI. It may well. It also is not the same. I am absolutely against wage and price controls. I think business worries about it and Wall Street worries about it; everybody does. The mood of the country is such that it is hard to see wage and price controls arising in the foreseeable years. I do not know administratively how difficult it is, but something like that—you cannot get any response unless you provide incentives. I do not know if it is TIP; I picked on it because it is a policy that is proposed and thought about. It might be something else we have not thought about yet, but something of that kind of policy could be helpful. The administrative costs are something to worry about and work out. Those who suggested this should also worry about the costs and bear the burden of that.

Representative BOLLING. I have the same view of the efficacy of wage and price controls that you do, but I am a little more nervous about their possibility in the next 10 years than you are, because if you look at the history of our getting involved with them it has at least once been totally unpredictable and a sort of exotic event, and I do not know what it would be in the body politic that would have the effect on the passage of wage and price controls that proposition 13 has had on the posturing in this House. I will not speak for the other body out of a sense of comity and the fact that I am on the Senate side.

Senator JAVITS. I will throw you out if you misbehave.

Representative BOLLING. The House is perfectly capable of passing something that it does not like very much if it gets a very, very strong signal from the West or even the East, so I am less sure, although I am equally sure they should not be tried except as a desperate last resort.

Mr. SINAI. As soon as you say "desperate last resort," you open the door. If you believe that the safest thing is to keep worrying and keep commenting on how they would not help—and I think the business and financial communities are convinced it would be a major mistake.

Representative BOLLING. I am, too, having had the misfortune as the 13th Democrat on the House Banking and Currency Committee with the advent of the Korean war, having had to try and manage for the administration legislation because nobody ahead of me would touch it.

Any more questions?

Mr. WALLACE. I would like to ask the panel about what seems to be an economic enigma. I gather that if you increase investment this would produce jobs for the economy. Lower inflation would help stimulate investment, according to the testimony. On the other hand, we seem unable to fight inflation because tight monetary and fiscal policies might hurt jobs. So we seem to be in this trap. How do we get out of it?

Mr. SINAI. Let me say that we want to make a distinction here. The autonomous reductions in inflation would be helpful on all fronts. I said it would be most preferable to other alternatives which involve tight monetary and fiscal policies which raise the costs that go with the possible benefits of reducing inflation. The cost is lower growth and higher unemployment. So we have to exercise our thinking about

means to lower inflation and not use stabilization policies, and that seems to be going on, whether it is changing the beef import quota or increasing the supply of lumber or building buffer stocks of commodities to put on the market when inflation arises, or whether it is an energy bill to protect us against OPEC. So it is those kinds of measures, and they have been talked about at great length by people who have been for or against regulation-induced prices, and it is that area that would rank highest. If that does not work and there is not enough in that, than we will end up as we always have, relying on tight stabilization policies to fight inflation. And we find as we have throughout the postwar period the biggest effect will be to create high rates of unemployment and slow growth in the economy.

Mr. WALLACE. I would like to get comments from the investment banking and corporate side on the same problems.

Mr. WENGLOWSKI. It is my view that you really have to use all three in order to solve this inflation problem, the secular rise in inflation. All three elements of policy would have to be used. I think there is no history that suggests that you can follow very expansive fiscal and monetary policies and at the same time cure inflation by income policies. I think perhaps the middle course would be monetary and fiscal policy designed to allow a modest degree of slack in the economy to continue. Let us say that you continue at 6½ percent unemployment for a couple of years—not going to 7 or 8 percent—but you allow some slack in the labor market, and some slack in the product markets as a backdrop. In addition, if you exercised yourself greatly in the areas of incomes policy and deregulation, all three together might be successful.

I would like to add one last thing. I would like to remind everyone, from the point of view of the impact on investment decisions, the term "incomes policy," of which TIP is a variant, is a term that was coined in Europe. The term means a policy to control the distribution of income, and in Europe it is used from that point of view as much as from the point of view of an anti-inflationary device. If you talk about business uncertainty and capital investment, politicizing more the issue of income distribution would be viewed by business with great alarm. If that is the way we attempt to reduce inflation, we may fail because of the adverse effect on investment.

Mr. CHAMBERS. I do not think I have any to add on that.

Mr. WALLACE. Could I ask one question of Mr. Sinai? In your prepared statement you have a chart showing after-tax return on capital, adjusted and unadjusted for inflation. I was about as interested in the drop from 1966 to 1971 as the fact that you have spread in those two curves.

Representative BOLLING. Which is which?

Mr. SINAI. The solid line is the nominal after-tax return, the illusory inventory capital gains from inventory adjustments for depreciation. You see in the 1970's the adjusted after-tax return, adjusted for inflation, continues to stay bad but the nominal one gets better. I think you're right, that is quite interesting, and it appears in both measures. What I should have done is plotted this from, say, 1955 or 1950.

Coincidentally, in 1966, as you recall, we began a period of rapid acceleration of inflation, and I think that is definitely causing the

divergence of the capital consumption component of this calculation. It becomes more pronounced in the 1970's. If we saw it over a long period, we would see that this secular decline coincided with the rapid rate of inflation in the country.

Representative BOLLING. It did because that was 1966, every economist from the most liberal to the most conservative thought we ought to have a tax increase, and eventually got a relatively small one 2 years later and by that time the horse had run out of the barn.

Mr. SINAI. That was an interesting period. I was a student at that time, and I think there was a question of what would happen in the off-year elections in 1966, or whether the public could be educated to understand why a tax increase was needed, and the decision was not to do it, because——

Representative BOLLING. There was another fatcor and that was a careful count made by an expert of the Ways and Means Committee of the House which indicated that nothing would come out, and the expert happened to be the President.

Mr. WALLACE. Mr. Wenglowski, on chart 7, it shows quite an increase in the total cost of capital. But yesterday we had testimony that the ratio of debt to equity had been increasing. Is it the large proportion of debt to equity that makes that sharp increase?

Mr. WENGLOWSKI. No, actually the reverse. Because the cost of equity capital is much higher than the cost of debt capital; and because since 1972 there has been a movement towar da greater use of equity on an incremental basis, mainly, retained earnings, that has shifted the weight in favor of equity recently and raised the cost of capital.

Senator JAVITS. I want to put in thee appropriate place that I thank you gentlemen very much for your cooperation and for your appearing on behalf of the minority.

Representative BOLLING. That will appear in the appropriate place. If you hold the weights constant you still get a rise, but you would since get a significant increase.

Mr. WALLACE. How do you figure if corporations sell stock? It does not cost them anything but they have to pay dividends.

Mr. WENGLOWSKI. A corporation sells stock at a PE ratio of 8 and uses the money to invest. If it cannot earn at least the inverse of 8, which is 12 percent, it is better off not selling the stock. So, the inverse of the PE ratio is the hurdle rate of return you must earn on investment to make it in the interests of your stockholders.

Mr. CHAMBERS. I think it is a considerable factor, management is sensitive to that.

Ms. MILLER. Mr. Wenglowski, you have mentioned there's a short-run surplus of capacity worldwide.

Mr. WENGLOWSKI. Actually, various segments of the world economy will be going, I suspect, in different directions over the near term. In the United States, we are probably now approaching a cyclical peak in capacity utilization. We expect a pretty significant slowdown next year, and if that occurs, the capacity utilization rates a year from now will be lower than they are today. Now, that means in the United States that the next period of real tightness in capacity will probably occur in the next upswing, probably in the 1980–81 period.

In Europe, they are in a very different situation. They have a great excess of capacity. If Europe continues to grow sluggishly, that would

further reinforce the view that a shortage of capacity will not be a problem over the near term. The problem has been moved out to the 1980 or 1981 period. But given the leadtimes on invstments, it is not good enough for business to start investing in 1980 or 1981.

Dr. SINAI. I would concur with that. We look to 1981 as a time, both in the United States and in the economies abroad as they catch up, where we can begin to worry about the whole world converging together.

Ms. MILLER. What about individual industries?

Mr. WENGLOWSKI. Well, one of the things that surprised people in 1972 was not so much the overall capacity utilization rate, but the very high operating rates of basic industries. Although the overall utilization rate never got up to levels that were alarming, you had shortages in paper, steel, and chemicals. Right now, capacity utilization is more even across industries and there does not appear to be a big block of industries close to tight capacity. So, there does not appear to be that kind of distributional problem. It looks a lot more uniform in terms of utilization rates across the board.

Mr. CHAMBERS. I would agree, there are shortages today in small areas such as fractional horsepower motors and things like that.

Mr. WENGLOWSKI. You hear of certain specific areas, but in terms of a big block of industries, I do not think it appears to be in the kind of situation that it was in 1972.

Ms. MILLER. You were the only one that mentioned, I think, economic stimulation from reduced taxes on capital gains. As you may know, there are several proposals which would call for either the elimination of taxes or a lowering of taxes on capital gains. Do you see any advantage in those proposals?

Mr. WENGLOWSKI. Yes, in terms of the cost of capital, rate of return problem, a reduction in taxes on capital gains would tend to raise the current after-tax return to investors. That would tend to increase the demand for stocks and pushup price earnings ratios and, thereby, reduce capital costs. So, a reduced taxation of capital gains would tend to lower the cost of equity, and that would be positive.

Mr. SINAI. That is correct. The only uncertainty is the reaction of the stock market to such a movement, but it would be probably positive. So that measure would be stimulating from the supply of funds side. We have another case where the pendulum may have swung too far in tax on capital gains and some readjustment of that is probably appropriate.

Mr. WENGLOWSKI. I might point out that if you lower the cost of capital to business by a tax reduction in capital gains, that tends to reduce the rate of increase in prices that would ultimately be necessary to raise rates of return. So from this point of view, a reduction in capital gains would tend to reduce the inflation rate.

Mr. SINAI. That is probably pretty small, so I suppose the markup over the cost of debt equity financing is an input into the pricing decision.

Mr. WENGLOWSKI. I don't have at hand on exact estimate of what it would do. But remember that psychology plays a big role and if investors viewed this as a major change, the effects on price-earnings ratios might be greater than arithmetic suggests.

Ms. Miller. On an entirely different subject, going back to Mr. Dennburg's discussion of the reduction of wages, I saw an interesting theory in the latest Challenge magazine. The theory was that wages in different sectors are segmented in terms of contours; in other words, you have similar sectors of wage earners grouped together and resembling a wave on the beach. Now different and external shocks like the coal miners' strike or a large contract, impact on the wave and push the contour out of symmetry. And there is a pressure within each group to reestablish lines along their normal contour. This behavior would imply that once a group has been pushed out of line, the pressures are so great for their position to be reestablished vis-à-vis the other groups that devices such as jawboning will be of no avail. These devices are too late whereas they should have occurred at the initial point of whatever pushed the first group out.

Mr. Wenglowski. Yes, the contour is pushed out by something like the coal strike settlement. I would have thought the contours for the other segments would also then move out to catch up with the coal strike settlement rather than pressures for the first to come back. But this is why I picked on wages, because once a wage increases it affects demand and is a major element of business costs, and so it shows up in prices most. So I guess you hate to pick on earnings of people, but the wage bill is an input to inflation and is the most significant cost. You mentioned jawboning as an attempt by the administration, but if this contour thing is true, jawboning will not have an effect.

Mr. Sinai. That is correct. Once the horse gets out of the barn it is gone. And I think that is why I turn more and more toward providing specific monetary incentives to get the kind of response on wages and maybe even on prices that you want to get in the private sector rather than jawboning. A jawboning deceleration program can chip away, but it will not solve our problem. Unfortunately, in all the policymaking in the last 5 or 6 years we have been trying to deal with the effects of inflation and we never come to grips fundamentally with what is causing it.

Representative Bolling. Part of the problem is the political problem. I have never seen—I do not mean the partisan problem—a study, but in my district the turnover in the subleaders in labor in the last 5 or 10 years has been absolutely fantastic. There have been contests in local union after local union, and turnover of perhaps 2 to 10 times the normal, and it is all over the subject that the rank and file want more in the pay envelope and they are putting enormous pressure on their subleaders to produce for them, and that is the contour effect. They read about somebody getting a very good settlement and they rate their leader against that settlement. It may be totally unreal and have no relationship to any reality, but you get this enormous political pressure, and I don't know whether it has begun to phase out or not, but the turnover in local union leadership in my area has been absolutely fantastic.

Mr. Sinai. The balanced approach that Mr. Wenglowski mentions is one way to do it. Then everybody bears a burden of reducing costs. And the other is, again, providing incentives, paying people for the burden they bear in the sense of limiting their wage demands, because until we began to do something like that, which I believe will always

go on then, we will never lick the inflation problem. Wages go up and prices go up and the wage earner looks at the profit base and says why should we pay, and business says the opposite, and this goes on.

Representative BOLLING. I think a great many people fail to realize for whatever reasons how tenuous is much of the labor leadership on its position. I'm not talking about people at the top, I'm talking about people coming up through the pyramid. If you will, and it certainly is a very different kind of situation then in the corporate management. It may be there that a constituent every now and then runs over a manager, but it is a relatively rare occasion, and as I say, I have not seen a study, but in my own experience as a representative of the whole country, the situation in labor has been fascinating.

Mr. WENGLOWSKI. On this issue, I think something that should be recognized is that at the present time the major pressure for wage increases is coming from the nonunion sector. The union sector has pretty much maintained its rate of increase. The recession had the major effect of slowing down nonunion wage gains. Nonunion wages are much lower relative to the union people and now they are catching up. That may be a particularly difficult thing for jawboning to offset. The only way you can stop the wage acceleration in the nonunion sector may be by raising the rate of unemployment.

Mr. WALLACE. One other question. We have been talking about depressed capital formation in the United States. Isn't it a fact that it is depressed throughout the world and that inflation is also pretty prevalent throughout the world? And what about the uncertainty caused by OPEC, which we haven't mentioned in terms of uncertainty? What about international uncertainty and its impact on capital formation?

Mr. WENGLOWSKI. I think that capital expansion in Germany is very depressed. In Japan, it is depressed and you have major bankruptcies occurring. Again, I think that excess capacity is the major problem and you have to ask yourself how much is the system operating differently this time versus how much of the weakness is just a reaction to excess capacity. I think flexible exchange rates introduce more uncertainty into the investment decisions. Looking at the appreciating currencies in Japan and Germany, that is a major reason for uncertainties holding back investment in those countries. Obviously, OPEC is a problem. It takes a higher rate of return to overcome these uncertainties and I'm not sure business expects that they will get it.

Mr. CHAMBERS. I would just add in talking with people about this regulatory problem that the situation appears to be worse in Europe than here. You have people coming over here to get going in this country because they think it is almost impossible in Europe. So in all I think there is much room for improvement here, but it is worse there.

Mr. WALLACE. We have neglected so far the issue of technological innovation as a means of greater profit. Resently Professor Houthakker underscored the importance of introducing modern production techniques in key industries such as steel, which is becoming out of date compared with its foreign competition. What can be done to promote technological innovations?

Mr. CHAMBERS. First of all, I agree heartily that we better keep up and that we are not keeping up in many basic areas, but this is also true of more advanced areas like TV sets. We should be spending like the Japanese for new advanced technology and we are not doing it. Again, a lot of their spending, as Mr. Wenglowski has pointed out, is in advance of the actual economic justification. They are now putting a lot of money into certain types of semiconductor things they would not be doing if they expect to have it junked tomorrow. Of course, they have a different system. In order to get these actions you have to have a system that encourages long-range projects even where sometimes you really cannot entirely justify them on a number basis unless you are willing to make some optimistic assumptions that the environment will stay favorable.

Representative BOLLING. Gentlemen, we are very grateful to you. This will be the appropriate place in which Senator Javits' appreciation will appear, and I too, thank you very much for your contributions and regret that I could not participate in all of it. But I am glad that I got here for this part of it.

[Senator Javits' appreciation follows:]

Senator JAVITS. I want to put in the appropriate place that I thank you gentlemen very much for your cooperation and for your appearing on behalf of the minority.

Representative BOLLING. The committee will meet for its final day tomorrow in this series of hearings at 10 a.m., in room 318, the Russell Senate Office Building. The committee stands in recess.

[Whereupon, at 12:25 p.m., the committee recessed, to reconvene at 10 a.m., Thursday, June 22, 1978.]

SPECIAL STUDY ON ECONOMIC CHANGE

THURSDAY, JUNE 22, 1978

PSYCHOLOGICAL RESPONSES TO INFLATION

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10:25 a.m., in room 318, Russell Senate Office Building, Hon. Richard Bolling (chairman of the committee) presiding.

Present: Representative Bolling.

Committee staff present: Louis C. Krauthoff II, assistant director; Thomas F. Dernburg and Deborah Norelli Matz, professional staff members; and Charles H. Bradford and Mark R. Policinski, minority professional staff members.

Special Study on Economic Change staff present: Charles S. Sheldon II, research director; Robert Ash Wallace, research director; Richard D. Bartel, staff economist; Paula J. Dobriansky, research assistant; A. A. "Chip" Sayers, research assistant; and George D. Krumbhaar, Jr., counsel.

Also present: John B. Henderson, Congressional Research Service, Library of Congress; and Mr. Douglas Ross, the Conference Board, New York, N.Y.

Representative BOLLING. We have a difficult situation and it probably has to do with air traffic from different directions. But I'm going to start, and if neither of the participating panelists are here by the time Mr. Gaines finishes his presentation we will have Professor Boulding's statement read and that will lead us into the discussion.

To make it even more difficult, I have to go to another committee meeting, and when I leave Mr. Sheldon will take over until and unless other members of the committee, who say they are coming, arrive, at which time we will turn it over to them.

We are very grateful to you, Mr. Gaines, for being here. You were supposed to be our second witness, but you have become our first one.

Mr. Gaines is senior vice president and economist at Manufacturers Hanover Trust Co., New York City. After his undergraduate and master's degree from the University of Washington, Tilford Gaines received his doctorate in business economics from Columbia. His career in the banking world has included positions at the Federal Reserve Bank of New York and the First National Bank of Chicago, where he became vice president for securities. He joined Manufacturers Hanover in 1967 and was appointed senior vice president in 1971. His regular monthly economic report is a valuable commentary on financial eco-

nomics, which I read quite faithfully. You may proceed as you wish, sir.

STATEMENT OF TILFORD C. GAINES, SENIOR VICE PRESIDENT AND ECONOMIST, MANUFACTURERS HANOVER TRUST CO., NEW YORK CITY

Mr. GAINES. Thank you very much, Mr. Chairman. I'm afraid my remarks will be so brief that I won't be able to bridge the gap.

Representative BOLLING. Just do as you please.

Mr. GAINES. I have a brief prepared statement that I will not read, I will just comment on it. My understanding is the subject of discussion today is the psychology of inflation. In that regard the United States has been blessed for the past many years, pretty much throughout history, in that the public is not inflation oriented. Logically, one would think that if the consumer expects prices to rise, he would go out immediately and buy whatever items he was thinking of buying to avoid price increases. This has not been the way the American consumer has behaved in the past. There has been a past tendency in a time of strong inflation expectations for consumers to defer major purchases, adding to their savings instead.

Logically, this does not sound rational, but in actual fact the reason is the inflation expectations create an uncertainty in the future, uncertainty of the ability to buy the essential things, so that inflationary expectations have a tendency to cause people to lay aside money to be available to pay for food, housing, clothing, as prices do go up.

Now this pattern of behavior has been helpful and an important part of the explanation for why the U.S. economy has never been an inflationary economy over the years. It helps in two ways: In the first place, by deferring spending the consumer directly takes some of the edge off of the inflation pressures that are building up. Second, by behaving in this way, instead of creating an inflationary boom by spending and buying in advance of inflation, it makes it easier for Government policy to be effective and to stabilize the total economy, minimizing the incidents and duration of recessions. This, in turn, has meant that public policies have not been as strongly expansionary, touching off another round of inflation.

This is the historic pattern of American spending. But there is a disturbing body of evidence being built now that the consumer approach to inflation is reverting more to the European, typically European, approach: Expecting inflation, they buy in advance.

In recent surveys of consumer expectations, they have shown two interesting things: First, that there has been a growing number of people who anticipate severe inflation in the months and years ahead and will at the same time anticipate a recession before too much longer. On the other hand, the number of people planning to make major purchases in the next 3 to 6 months has been rising sharply. Thus, they are reverting to what one might call the more logical pattern, but at the same time, I think, a dangerous pattern.

What this is doing is creating an inflationary boom. We are now in the fourth year of the current business recovery, which makes it one

of the longest on record. In the first quarter we had very slow business activity, primarily due to the coal strike. But in the second quarter, according to preliminary data, a boom seems to have developed, based primarily upon consumer spending. As you know, sales of new automobiles, domestic automobiles, have been skyrocketing; and all major appliances, plus very strong new housing. In other words, in all of the major expenditure areas consumers have been spending heavily. This is creating an atmosphere of ebullience in the business community.

Businessmen this time around, remembering what happened to them in the 1973 to 1974 period, have been very cautious in managing their inventory. They were carried away in 1973 and early 1974 by a concern over shortages and over concern about inflation and added vastly to their inventories and orders outstanding. This preceded the recession that started in the fourth quarter of 1973 that was characterized by very sizable inventory liquidation. By the way, throughout history most recessions have been related to the inventory cycle: First, accumulation, then clearing the inventories. So far this time businessmen report severe conservatism in managing inventories, which is, of course, beneficial for the near-term outlook of the economy. But one has to ask the question as they look at current levels of their sales are they able to interpret them properly.

What I have in mind is that the boom at the retail level is related to two things other than the ongoing purchases of current consumption. One is the catchup on sales that were not made in the first quarter primarily because of severe weather conditions; the second is the supply and demand character that has developed among consumers. So the current level of sales is being bloated by two temporary circumstances. When typical businessmen look at this they probably will not be able to interpret the high level of sales in terms of these temporary circumstances. Consequently, he may extrapolate the recent business growth and schedule inventory accumulation to meet the anticipated sales level. If so, the chances are good, quite good, that he will find that he has overbuilt inventory by the fourth quarter of this year. I anticipate the purchases to be flattening out and inventory will find it is again overstocked, and in the process of reducing inventories, this will lead us into a recession in the first half of 1979.

Why do I expect the consumer buying surge to end? Well, there are a number of reasons for it, but essentially it all comes down to the fact that consumers are chewing up expendable income in excess of the rate of restoring it. Year to year real personal income has been down for the past several months. At the same time they have been adding heavily to their debt to pay for these particular items, which is increasingly adding to the monthly payments they have to pay out of current income. Taken together, these two forces reduce consumers' ability to spend. For that reason I would expect boom levels of sales to begin to taper off by the early fall, and certainly early 1979. As this happens, we once again have an inventory problem to deal with.

In one sense inflation is based upon psychological attitudes. As I have mentioned, in the past we have been fortunate in not being an inflationary-prone economy, so that these attitudes have not seriously affected us. Now, I have mentioned the short run, what I see to be a

shift of consumer behavior. I think there is a longer run consequence, too, that is probably of greater significance unless it can be corrected, and that has to do with our ability to control inflation over the long run.

There has been a tendency in the press and elsewhere to attribute our recent round of inflation to certain discrete specific developments. For example, the constantly rising costs of energy is mentioned. Currently, high-food prices have become the villian. They point to the increase in the minimum wage in January, the increase in the payroll taxes, the reference point price system in steel and a number of these other one-time episodes that are having an inflationary impact this year. But the problem with that type of analysis is that inflation has been with us for so long and has become so deeply embedded, that the ongoing spiral within the system, aside from the external shocks, virtually guarantees a continuation of the present inflation almost indefinitely; and perhaps at some point if attitudes continue it could generate a Brazilian experience, which is remotely possible, or the Weimar Republic in Germany, that type of experience. I do not anticipate these; these are extreme results. The most we can get in the long run, if consumers have, in fact, gone through this shift in attitudes in reaction to expectations of inflation, what it will mean is that the job of the Government in regulating the economy and its long inflation will be decidedly impeded and be made decidedly more difficult.

What will happen, then, assuming that this will be a permanent shift in attitudes? There will be a situation in which a period of boom is followed by a period of bust, the pattern of our economic performance over the past 150 years, but there will be a tendency in this case for each succeeding round of inflationary boom to become more severe and each succeeding recession more severe, so that instead of the result one gets from the rock in the pond as reducing the ripples, what we might find is a buildup of inflationary waves over time.

Therefore, it seems to me in the various approaches that have been discussed toward getting inflation under control, a great deal of emphasis should be placed on creating a frame of mind in the American public that accepts the proposition that inflation can be cured.

This is by no means an easy prescription. In fact, I don't have the prescription, but it seems to me that what it comes down to is for the Government to pursue a consistent set of policies aimed at holding inflation down; policies that will document what is asserted: That inflation is a serious problem. We need a consistent set of policies over a long enough period of time to break the unfortunate and unstable attitudes of the public that could become similar attitudes on the part of business, because this very likely would lead to a rather long period of stagnating economic conditions.

There is a good chance by next year this time we will be in a recession. If we are, I hope we will not make the mistakes of the past, because we would have gone through the pain without the benefits. With high unemployment and high interest rates we become frightened and back away and work on the unemployment rather than the inflation through monetary policy and fiscal policy in an effort to pump up the economy. I hope this time the policies are steady.

The Federal Reserve will continue through this period of slow business, continue to attempt to achieve its target rates in monetary growth

and credit growth. I hope that the administration will avoid tax reductions, avoid new expenditure programs, permit the passage of time to bring the budget into closer balance.

As I say, this prescription would no doubt lead to a longer period of stagnation, 2 years or so, but I think the result of it is it might make headway on price inflation. Nobody can guarantee it, but we have not tried it before, so before we can write it off let's at least give it a chance, and this way we could turn around and set a public attitude toward inflation.

[The prepared statement of Mr. Gaines follows:]

PREPARED STATEMENT OF TILFORD C. GAINES

One would ordinarily think that a person who expects prices to rise would buy immediately whatever it is he is planning to buy so as to beat the price increase. Traditionally, however, this is not the way the American consumer has reacted to an expectation of inflation. Instead, the American consumer at such a time has tended to defer major purchases and increase his savings rate to be sure that there would be money available to pay for such essentials as food and rent as the cost of living rose.

This behavior pattern has been most valuable in two respects. First, it has helped immensely to restrain inflation by holding down the buying waves that in inflationary periods in other countries have driven prices steeply higher. Second, it has tended to act as a stabilizing influence for the economy. That is to say, by avoiding inflationary booms it has helped the country to avoid the recessions that typically follow a boom period.

Recent surveys of consumer expectations and buying plans suggest that this traditional behavior pattern is shifting. The surveys show that a large majority of the consumer population expects inflation to become a steadily more serious problem, and there is considerable evidence of concern that an economic recession may lie ahead. At the same time—quite contrary to their previous reaction—they are tending to accelerate their buying plans, particularily for major items such as automobiles and appliances. Evidence of this has been seen in recent months in the very strong demand at the retail level for most consumer products, but particularly for the big ticket items.

If this shift in consumer behavior is in fact occurring, it can be of great significance for the prospects for the economy in the near term and for our ability to control inflation over the longer term. There has been growing concern among economists and public officials that within the next few quarters we may find ourselves in the situation that most of the rest of the developed world already is in, a condition of stagnant economic growth accompanied by price inflation, a condition that has come to be known by the inelegant term stagflation. If consumers are indeed on a buying spree, one result would be a buildup of business inventories as businessmen projected continued consumer buying at present overheated levels. However, this buying performance increasingly puts pressure on income available for spending, as need to repay debt accomulated in the process takes a larger and larger part of disposable income. As consumer spending inevitably levels off, then, businessmen will find that they have over-inventoried, leading to inventory liquidation. This has been the classic pattern of most of our economic booms and busts—a boom followed by a recession.

There is insufficient evidence at the moment to support a firm prediction that the economy will be in a recession by early next year, but given present circumstances there is considerable reason for concern that it will be. Fortunately, the evidence to date does not suggest that industry is overbuilding its inventories. One very important reason for business conservatism with respect to inventories is the memory of what happened to them in the recession of 1973–1975. At that time, inventories were vastly overbuilt and the ensuing inventory correction was the principal cause for what turned out to be the longest and most severe recession in our postwar experience. Another reason for business conservatism is that with the cost of credit to refinance inventory as expensive as it is today, and with the general anticipation that interest rates will rise even further, it is necessary to anticipate rather severe inflation, at a rate greater than the rate of interest, to justify stockpiling. If we are able to avoid excess inventory building by business we will avoid a recession and experience only period of relatively

flat business activity. If we do not, we will almost surely be in a recession by this time next year.

Of even greater importance in the apparent shift in public response to inflation expectations is the significance that such a shift could have for our ability to control inflation over the longer run. What could evolve is a self-fulfilling prophesy in which the fear of inflation and efforts to guard against inflation would lead to the very inflation that was feared. Carried to its ultimate extreme, the end result could be totally uncontrolled inflation such as that which Germany experienced in the early 1920s. But with reasonably intelligent monetary policy there should be no reason to fear such an extreme outcome. What would be more likely would be a series of severe bouts with inflation interspersed with frequent and perhaps increasingly severe recessions.

It seems to me that top priority should be given to public policies aimed at avoiding or correcting the sort of shift in public response that I have suggested here. Inflation has become so deeply embedded in our system and so broadly accepted over the past ten years or so that policies intended to stabilize public attitudes will be difficult to devise and only slow in their impact. But the effort must be made through a posture by governments at all levels that encourages confidence, that encourages savings, and that promises to be successful.

Representative BOLLING. Thank you very much, Mr. Gaines. It was very interesting.

We have a volunteer, I take it. I'm delighted—or maybe he has been co-opted. We will be delighted to accept the offer of Mr. Douglas Ross, who is a senior economist on the Conference Board. He did his doctoral dissertation under Mr. Boulding, and he could stay on the panel. We are delighted to have you. I am going to have to go for a little while, but I will be back, and if you would read the statement it will be very helpful.

Mr. ROSS. I would like to say I was co-opted. This is the first time I have seen this statement.

Representative BOLLING. I hope you agree with some of it. I have read it and it is very interesting.

STATEMENT OF KENNETH E. BOULDING, DIRECTOR, INSTITUTE OF BEHAVIORAL SCIENCE, UNIVERSITY OF COLORADO, BOULDER, PRESENTED BY DOUGLAS ROSS, SENIOR ECONOMIST, THE CONFERENCE BOARD, NEW YORK, N.Y.

Mr. ROSS. I am Douglas Ross with the Conference Board, sitting in for Kenneth Boulding, if it is possible to sit in for Kenneth Boulding. I think not, knowing him.

The title of his prepared statement is "Inflation as addiction: Could We Stand the Withdrawal Symptoms?"

We live in an age of inflation. As figure 1, in Mr. Boulding's prepared statement, dramatically shows, in the last 38 years there is only 1 year in which the price level has dropped, just after the World War II. As a result of this long experience, we are not so well adjusted to inflation that any attempt to stop it and to return to a stable price level would result in very severe withdrawal symptoms.

A critical variable here is the real rate of interest. This is expressed not only in the average rate over all loan transactions, but also the distribution of rates among transactions of different degrees of risks and other characteristics. It is expressed also in the proportion of the national income which goes to interest, though this also depends on the volume of debt outstanding. The real rate of interest is roughly

equal to the nominal rate minus the rate of inflation. If I borrow $100 at the nominal rate of 8 percent per annum, I pay back $108 this time next year; if in the interval the price level has risen 5 percent, the value this year's dollars of the $108 I am going to receive next year is only about $103, so the real rate of interest is 3 percent; that is, 8 percent minus 5 percent. This is only strictly true of interest that is compounded continuously, but that is a small factor that we can neglect.

In the 20 years from about 1945 to 1965, real interest rates in the United States were very low, mainly because the banking and financial community had not really caught on to the fact that we were in a long-run inflation and, hence, constantly underestimated the rate on the effects of inflation. We see this dramatically in figure 2, in Mr. Boulding's prepared statement, where we see the proportion of national income going to interest. This had been 5.4 percent in 1929 and had risen to 10.7 percent in 1932 under the impact of the great deflation and depression. It was almost negligible through the late 1940's and early 1950's. In the 1960's, however, the financial community caught on to the fact that we were in an age of inflation, nominal interest rates rose to a level which more than compensated for the inflation, and the real rate of interest and the proportion of national income going to interest rose steadily, so it is now more than it was in 1929—6.6 percent. This has coincided with a real squeeze on profits in the late 1960's and 1970's, again seen in figure 2. This undoubtedly is behind the extraordinary phenomenon of lagging stock prices in an age of inflation. The overall price of stocks has risen much more slowly than the general price level, defying the economist's belief that as stocks represented real goods in the shape of buildings, machines, inventories, and so on, that as the general price level rose, the price of these should rise and so the value of stocks should rise also. This neglected the fact that the value of capital reflects the profit which accrues from its ownership, discounted at some rate which tends to reflect the rate of interest on loans and bonds. As interest rises and profit falls, the value of the real capital stock in dollar terms is certain to fall in real purchasing power. This undoubtedly is the major reason why the stock market has not had a speculative boom as it had in the 1920's or even the 1950's.

The excess of the average rate of profit resulting from the ownership of real goods and the average rate of interest derived from the ownership of loans and bonds is a very important aggregate quantity in the ecoomic system. The decision to employ a particular person for a particular time involves a comparison between a return on capital put out at interest and the return on capital invested in goods in process and fixed capital goods. If the expected return on hiring a person for a month does not exceed the return on putting this money out to interest by an amount sufficient to compensate the owner for the actual risk involved, the money will be used to buy bonds rather than to employ the person so a potential employer will shift his portfolio; that is, the structure of the balance sheet, into liquid assets and interest-bearing assets and away from real goods on which he hopes to make a profit if that hope is not sufficiently lively.

The volume of employment and unemployment is thus very closely

related to the perceptions of employers and potential employers of the gap between the real rate of interest and the real rate of profit. We saw this dramatically in the Great Depression, when in 1932 and 1933 profits were negative, the real rate of interest was high, and almost anybody who gave employment was a fool, and the economy only survived at all because habit fortunately justified foolishness. The way to get richer between 1929 and 1932 was to sell all you had, not give it to the poor, but put it in bonds, and so create unemployment. If people can get rich by creating unemployment, this is of course a very bad outlook for the society.

The long boom of the fifties and sixties was very closely related to the fact that the inflation was not anticipated and hence the real rates of interest were extremely low. In that period people got rich by giving employment, but holding real goods, and by investing in the increase of real capital. Gross private domestic investment remained astonishingly stable at about 15 or 16 percent of the GNP during this whole period.

The picture is complicated, of course, by consumer behavior. As inflation becomes increasingly anticipated, households catch on to the fact that money stocks have a negative rate of interest; that is, they will be worth less in purchasing power next year. Consequently, the willingness to hold money stocks declines, although if nominal rates of interest increase to the point where there is a real rate of interest on the holding of bonds, the decline in money stocks may go into increase in bonds rather than increase in consumer goods. If this goes on too much, of course, the price of bonds will rise to the point where real interest rates fall again, for the higher the price of a given bond, the less the real rate of interest on it. The very uncertainties of inflation, however, make the bond market very unreliable as a determiner of any kind of ultimate rate of interest.

The great danger of inflation is that if we rely on this to lower the real rate of interest, its effects will become less and less significant as nominal rates of interest rise to adjust, and the more we adjust to inflation, the more we have to increase the rate of inflation in order to get the same benefits. What we cannot adapt to, however, is an accelerating rate of inflation, for this inevitably leads into hyperinflation and collapse. The "stagflation problem" of which we hear so much nowadays is the coexistence of unacceptably high rates of unemployment and unacceptably high rates of inflation. It is a result, at least in part, of our adaptation to inflation, particularly in regard to real rates of interest.

The psychological and political sources of inflation are, of course, very complex. One can say in a very broad way that inflation is a result of everybody wanting more than there is. It is the most fundamental principle of economics that we cannot have more than there is, and when people want more than there is in total, one way to fool them is to pay them off in depreciating dollars. The only thing which is capable of indefinite exponential expansion, unfortunately, is the number of dollars in the money stock, at least until the arithmetic gets more than we can stand and we have to create a new unit and move the decimal point back a few places. At the relatively modest rate of 5 percent per annum, the price level increases 100 times in 94 years, 1,000 times in 141 years. An inflationary dynamic arises if there is no possibility of

ever reducing a money price or a money wage, for them all adjustments in the relative price structure have to be done by increases. Every time there is an increase in a price or a wage it is at the expense of the rest of society, and the rest of society takes its revenge shortly by raising its prices or wages and so we go merrily on.

If we are to combine stable price level with full employment, we must first of all have an interest rate policy which would give us an interest rate sufficiently below the profit rate to insure full employment, and we must make it acceptable that some prices and money wages must sometimes fall; otherwise there can be no adjustment of the relative price structure, and this adjustment needs to go on all the time. If the pressure always came from wages, one might solve the problem by paying wages in a special kind of money, say "yellow money" and then setting a rate of exchange between yellow money and the green money with which we bought things. Then we could allow wages in yellow money to rise indefinitely and by simply altering the rate of exchange keep the price level in green money constant. Unfortunately, the matter is not so simple and many times price increases come not even from wicked monopolists, but from speculative movements in competitive commodity markets, which then generate movements in money wages and other prices to compensate. It is only in speculative markets that we can ever have a decline in prices it seems, but when prices decline in speculative markets this does not set off a round of money price and wage declines in the rest of the economy because of the downward stickiness of the more monopolistic markets. We then get a "ratchet effect" and every rise in prices will set off a round of other rising prices, but a fall in prices will not set off a round of falling prices. Then we are into constant inflation again.

An additional complication is that we have to take care of what might be called the "adding up" effect. This again is one of the great contributions of John Maynard Keynes. He saw that the total product has to be disposed of in some way either as consumption in households, or as willing additions to the total stock of capital, that is, gross private domestic investment, or as Government consumption, or as net exports. If these four items do not add up to the total full-employment product, there will be unwanted accumulations of goods, especially in inventories, beyond what investors are willing to hold. To try to unload these excess inventories by reducing prices can lead to deflation, profit decline, and unemployment, as we saw in 1929–32. If this goes far enough it can lead to catastrophic decline in investment, fixed capital, housing, buildings, machines, and so on with even more unemployment. If prices are more rigid, the only cure for excess inventories is to cut back production and create unemployment directly. What this means is that if we are to maintain full employment, then if there is a decline in any one of these four components, it must be offset by an increase in the others. Thus, the tremendous decline in Government consumption in defense, for instance, after the Second World War was offset by a sharp increase in consumption, private investment, and in civilian Government expenditure, so that we achieved the "great disarmament" in 1945 without unemployment ever rising above 3 percent. A similar episode took place in the early 1960's, when again we reduced the defense consumption from about 9 percent to 7 percent

of the GNP, where in this case civilian Government, especially State and local, more than took up the slack and unemployment fell. The reverse happened at the end of the Korean war when the rather small decline in defense consumption was not offset and unemployment rose.

Managing the economy, indeed, is by no means an easy task. We have to offset changes in household purchases and gross private domestic investment sometimes with quite rapid and difficult changes in public expenditure. It is particularly difficult in the United States, for public expenditures are made by an extraordinary hodgepodge of Federal, State, and local governments and there is no overall coordinating agency. What happens in the Federal Government needs to be offset by what is happening in State or local governments, which are quantitatively more important today. Use of the public "grants economy" in this regard is crucial but, very little understood and on the whole badly managed. Public expenditures are usually made without any regard to the overall macroeconomic effect.

The critical question, therefore, is if we try to control inflation now, will we push ourselves into something like the Great Depression of 1929–32? If we simply try to do it by cutting down Government expenditure and creating a budget surplus, thus absorbing money stocks from the pockets of the public without doing anything else, we very easily could create a catastrophic situation in which profit rates fell catastrophically, unemployment rose spectacularly, and investment declined, breaking the habits of 30 years which have given us on the whole a remarkably stable economy, even though it may be only operating on seven cylinders out of eight. In the 50 years since 1928, we have, however, learned something—we have much better economic information, we have national income statistics, we have at least a crude body of theory about managing the economy—but it would be most unwise to rest on our laurels. We are perhaps passing some very dangerous straits, between the Scylla of accelerating inflation, with possible hyperinflation and collapse, and the Charybdis of clumsy attempts at control that could also land us in severe depressions and collapse. There are siren voices of Pollyanna optimism to which we should close our ears, and with a wise Ulysses maybe strapped to the mast we can still make the trip.

[The prepared statement of Mr. Boulding, submitted by Mr. Ross, follows:]

Prepared Statement of Kenneth E. Boulding

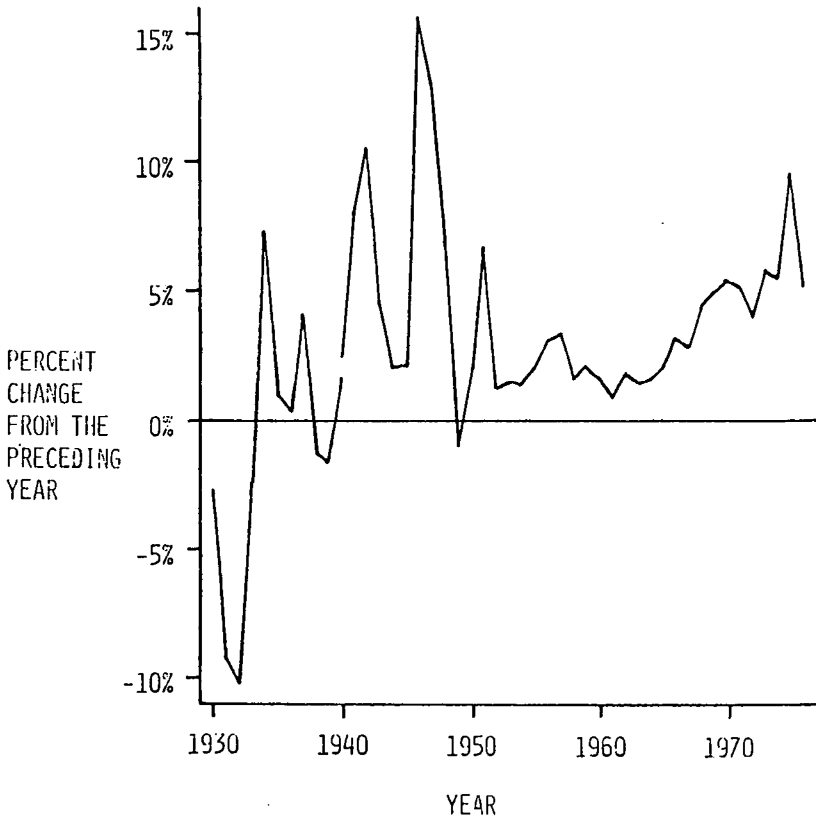
Inflation as Addiction: Could We Stand the Withdrawal Symptoms?

We live in an age of inflation. As Figure 1 dramatically shows, in the last 38 years there is only one year in which the price level has dropped, just after the Second World War. As a result of this long experience, we are now so well adjusted to inflation that any attempt to stop it and to return to a stable price level would result in very severe withdrawal symptoms.

A critical variable here is the real rate of interest. This is expressed not only in the average rate over all loan transactions, but also the distribution of rates among transactions of different degrees of risks and other characteristics. It is expressed also in the proportion of the national income which goes to interest, though this also depends on the volume of debt outstanding. The real rate of interest is roughly equal to the nominal rate minus the rate of inflation. If I borrow $100 at the nominal rate of 8 percent per annum, I pay back $108 this time next year; if in the interval the price level has risen 5 percent, the value this year's dollars of the $108 I am going to receive next year is only about $103,

so the real rate of interest is 3 percent; that is, 8 percent minus 5 percent. This is only strictly true of interest that is compounded continuously, but that is a small factor that we can neglect.

FIGURE 1



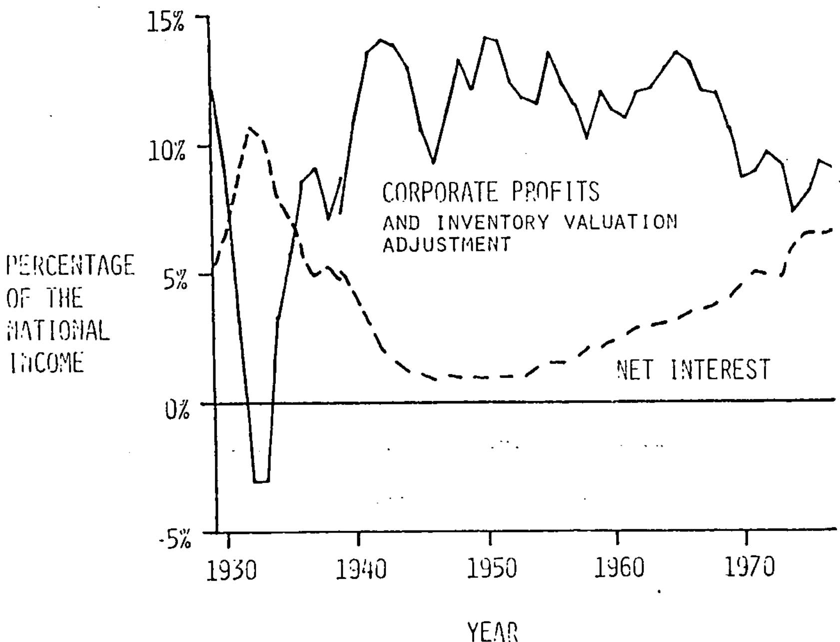
SOURCES: 1940-1977 - ECONOMIC REPORT OF THE PRESIDENT - 1978
1929-1940 - ECONOMIC REPORT OF THE PRESIDENT - 1970

In the 20 years from about 1945 to 1965, real interest rates in the United States were very low, mainly because the banking and financial community had not really caught on to the fact that we were in a long-run inflation and, hence, constantly underestimated the rate on the effects of inflation. We see this dramatically in Figure 2, where we see the proportion of national income going to interest. This had been 5.4 percent in 1929 and had risen to 10.7 in 1932 under the impact of the great deflation and depression. It was almost negligible through the late 1940's and early 1950's. In the 1960's, however, the financial community caught on to the fact that we were in an age of inflation, nominal interest rates rose to a level which more than compensated for the inflation, and the real rate of

interest and the proportion of national income going to interest rose steadily, so it is now more than it was in 1929 (6.6 percent). This has coincided with a real squeeze on profits in the late 1960's and 1970's, again seen in Figure 2. This undoubtedly is behind the extraordinary phenomenon of lagging stock prices in an age of inflation. The overall price of stocks has risen much more slowly than the general price level, defying the economist's belief that as stocks represented real goods in the shape of buildings, machines, inventories and so on, that as the general price level rose, the price of these should rise and so the value of stocks should rise also. This neglected the fact that the value of capital reflects the profit which accrues from its ownership, discounted at some rate which tends to reflect the rate of interest on loans and bonds. As interest rises and profit falls, the value of the real capital stock in dollar terms is certain to fall in real purchasing power. This undoubtedly is the major reason why the stock market has not had a speculative boom as it had in the 1920's or even the 1950's.

FIGURE 2

CORPORATE PROFITS AND NET INTEREST
AS A PERCENTAGE OF THE NATIONAL INCOME
U.S.A. 1929-1977



SOURCE: 1939-1977 - ECONOMIC REPORT OF THE PRESIDENT 1978
1929-1939 - ECONOMIC REPORT OF THE PRESIDENT 1970

The excess of the average rate of profit resulting from the ownership of real goods and the average rate of interest derived from the ownership of loans and bonds is a very important aggregate quantity in the economic system. This is

something, oddly enough, which was well known to Knut Wicksell and to John Maynard Keynes, but it figures much less prominently in the thought of modern economists. The reason for the importance of this parameter is that it affects both investment decisions and employment decisions, and it can affect both the rate of economic development and the level of unemployment. Anybody who "gives employment" is exchanging money (the wage) (which could have been put out to interest by the purchase of a bond or the making of a loan) in return for the products of the work, which is real goods. The decision to employ a particular person for a particular time involves a comparison between a return on capital put out at interest and the return on capital invested in goods in process and fixed capital goods. If the expected return on hiring a person for a month does not exceed the return on putting this money out to interest by an amount sufficient to compensate the owner for the actual risk involved, the money will be used to buy bonds rather than to employ the person so a potential employer will shift his portfolio, that is, the structure of the balance sheet, into liquid assets and interest-bearing assets and away from real gods on which he hopes to make a profit if that hope is not sufficiently lively.

The volume of employment and unemployment is thus very closely related to the perceptions of employers and potential employers of the gap between the real rate of interest and the real rate of profit. We saw this dramatically in the Great Depression, when in 1932 and 1933 profits were negative, the real rate of interest was high, and almost anybody who gave employment was a fool, and the economy only survived at all because habit fortunately justified foolishness. The way to get richer between 1929 and 1932 was to sell all you had, not give it to the poor, but put it in bonds, and so create unemployment. If people can get rich by creating unemployment, this is a very bad outlook for the society.

The long boom of the 1950's and 1960's was very closely related to the fact that the inflation was not anticipated and hence the real rates of interest were extremely low. In that period people got rich by giving employment, by holding real goods, and by investing in the increase of real capital. Gross Private Domestic Investment remained astonishingly stable at about 15 or 16 percent of the GNP during this whole period. It is still surprisingly stable. One wonders how much this is a result of habit, and whether a succession of disappointments might not break the habit, in which case we could easily face disastrous depression.

The picture is complicated, of course, by consumer behavior. As inflation becomes increasingly anticipated, households catch on to the fact that money stocks have a negative rate of interest; that is, they will be worth less in purchasing power next year. Consequently, the willingness to hold money stocks declines, although if nominal rates of interest increase to the point where there is a real rate of interest in the holding of bonds, the decline in money stocks may go into increase in bonds rather than increase in consumer goods. If this goes on too much, of course, the price of bonds will rise to the point where real interest rates fall again, for the higher the price of a given bond, the less the real rate of interest on it. The very uncertainties of inflation, however, make the bond market very unreliable as a determiner of any kind of ultimate rate of interest.

The great danger of inflation is that if we rely on this to lower the real rate of interest, its effects will become less and less significant as nominal rates of interest rise to adjust, and the more we adjust to inflation, the more we have to increase the rate of inflation in order to get the same benefits. This can easily land us in a catastrophic dynamic. Society can adapt fairly easily to a constant rate of inflation, which, when everything else is worked out in the way of adjustment of long-term contracts, pensions, and so on, amounts really to tax on "idle money" and not much else. What we can not adapt to, however, is an accelerating rate of inflation, for this inevitably leads into hyperinflation and collapse. The "stagflation problem" of which we hear so much nowadays is the coexistence of unacceptably high rates of unemployment and unacceptably high rates of inflation. It is a result, at least in part, of our adaptation to inflation, particularly in regard to real rates of interest.

The psychological and political sources of inflation are of course very complex. One can say in a very broad way that inflation is a result of everybody wanting more than there is. It is the most fundamental principle of economics that we cannot have more than there is, and when people want more than there is in total, one way to fool them is to pay them off in depreciating dollars. The only thing which is capable of indefinite exponential expansion, unfortunately, is the number

of dollars in the money stock, at least until the arithmetic gets more than we can stand and we have to create a new unit and move the decimal point back a few places. At the relatively modest rate of 5 percent per annum, the price level increases 100 times in 94 years, 1,000 times in 141 years. An inflationary dynamic arises if there is no possibility of ever reducing a money price or a money wage, for then all adjustments in the relative price structure have to be done by increases. Every time there is an increase in a price or a wage it is at the expense of the rest of society, and the rest of society takes its revenge shortly by raising *its* prices or wages and so we go merrily on.

If we are to combine stable price level with full employment, we must first of all have an interest rate policy which would give us an interest rate sufficiently below the profit rate to ensure full employment, and we must make it acceptable that *some* prices and money wages must sometimes fall; otherwise there can be no adjustment of the relative price structure, and this adjustment needs to go on all the time. If the pressure always came from wages, one might solve the problem by paying wages in a special kind of money, say "yellow money" and then setting a rate of exchange between yellow money and the green money with which we bought things. Then we could allow wages in yellow money to rise indefinitely and by simply altering the rate of exchange keep the price level in green money constant. Unfortunately, the matter is not so simple and many times price increases come not even from wicked monopolists, but from speculative movements in competitive commodity markets, which then generate movements in money wages and other prices to compensate. It is only in speculative markets that we can ever have a decline in prices it seems, but when prices decline in speculative markets this does not set off a round of money price and wage declines in the rest of the economy because of the downward stickiness of the more monopolistic markets. We then get a "ratchet effect" and every rise in prices will set off a round of other rising prices, but a fall in prices will not set off a round of falling prices. Then we are into constant inflation again.

An additional complication is that we have to take care of what might be called the "adding up" effect. This again is one of the great contributions of J. M. Keynes. He saw that the total product has to be disposed of in some way either as consumption in households, or as willing additions to the total stock of capital, that is, gross private domestic investment, or as government consumption, or as net exports. If these four items do not add up to the total full employment product, there will be unwanted accumulations of goods, especially in inventories, beyond what investors are willing to hold. To try to unload these excess inventories by reducing prices can lead to deflation, profit decline, and unemployment, as we saw in 1929–32. If this goes far enough it can lead to catastrophic decline in investment, fixed capital, housing, buildings, machines, and so on with even more unemployment. If prices are more rigid, the only cure for excess inventories is to cut back production and create unemployment directly. What this means is that if we are to maintain full employment, then if there is a decline in any one of these four components, it must be offset by an increase in the others. Thus, the tremendous decline in government consumption in defense, for instance, after the Second World War was offset by a sharp increase in consumption, private investment, and in civilian government expenditure, so that we achieved the "great disarmament" in 1945 without unemployment ever rising above 3 percent. A similar episode took place in the early 1960's, when again we reduced the defense consumption from about 9 percent to 7 percent of the GNP, where in this case civilian government, especially state and local, more than took up the slack and unemployment fell. The reverse happened at the end of the Korean War when the rather small decline in defense consumption was not offset and unemployment rose.

Managing the economy, indeed, is by no means an easy task. We not only have to keep watch constantly on the financial markets and the rate of interest, a task which the Federal Reserve System has botched almost consistently during its whole history, and never more than between 1929–32. We have to offset changes in household purchases and gross private domestic investment sometimes with quite rapid and difficult changes in public expenditure. It is particularly difficult in the United States, for public expenditures are made by an extraordinary hodgepodge of federal, state, and local governments and there is no overall coordinating agency. What happens in the federal government needs to be offset by what is happening in state or local governments, which are quantitatively more important. Use of the public "grants economy" in this regard is crucial but, very

little understood and on the whole badly managed. Public expenditures are usually made without any regard to the overall macroeconomic effect.

The critical question, therefore, is if we try to control inflation now, will we push ourselves into something like the Great Depression of 1929–32? If we simply try to do it by cutting down government expenditure and creating a budget surplus, thus absorbing money stocks from the pockets of the public without doing anything else, we very easily could create a catastrophic situation in which profit rates fell catastrophically, unempolyment rose spectacularly, and investment declined, breaking the habits of thirty years which have given us on the whole a remarkably stable economy, even though it may be only operating on seven cylinders out of eight. In the 50 years since 1928, we have, however, learned something—we have much better economic information, we have national income statistics, we have at least a crude body of theory about managing the economy—but it would be most unwise to rest on our laurels. We are perhaps passing some very dangerous straits, between the Scylla of accelerating inflation, with possible hyperinflation and collapse, and the Charybdis of clumsy attempts at control that could also land us in severe depressions and collapse. There are siren voices of Polyanna optimism to which we should close our ears, and with a wise Ulysses maybe strapped to the mast we can still make the trip.

Mr. SHELDON [presiding]. Thank you very much, Mr. Ross.

Mr. Juster, I might explain, although you are very much a victim of what is happening, that we discovered that we Americans are being affected by air traffic control conditions, and Mr. Douglas Ross, senior economist at the Conference Board, yielded to some severe armtwisting and agreed to give Professor Boulding's statement. In addition, Congressman Bolling, who has been chairing the committee this morning, has been called away to the Rules Committee, and we are making do as best we can, and we would like to have the opportunity to hear from you.

Prof. F. Thomas Juster, professor of economics and program director of the Survey Research Center, University of Michigan. Professor Juster is a graduate of Rutgers and received his Ph. D. from Columbia. After service on the staff of the National Bureau of Economic Research, where he became vice president for research, Mr. Juster moved to his present position in the University of Michigan in 1973.

We would be very happy to hear from you now, and after that, we will open up the panel for discussion.

STATEMENT OF F. THOMAS JUSTER, PROFESSOR OF ECONOMICS AND PROGRAM DIRECTOR, THE SURVEY RESEARCH CENTER, UNIVERSITY OF MICHIGAN, ANN ARBOR

Mr. JUSTER. Thank you very much.

Prepared statements have been circulated, but I would plan to read selectively from the version which you have in front of you, since it is rather long to present in 15 minutes, and I will indicate where I am leaving portions out. The portions that I will leave out are not necessarily less important parts; it is just that they could be enlarged upon later in the discussion and some are rather more technical.

I appreciate this opportunity to appear from the Joint Economic Committee to discuss the relation between inflation and consumer behavior. The subject is important, and the way inflation is perceived by consumers and the way it affects their behavior is often misunderstood.

My comments are in four sections. In the first part, there is a discussion of the behavioral relationship between inflation and consumer

spending/saving behavior. Both theoretical considerations and empirical evidence are presented. Part II contains a discussion of psychological reactions to inflation. In particular, data on consumer perceptions of real income change in an inflationary environment are presented, as are data on the degree of concern among consumers on the important social problems of inflation and unemployment. The third part presents a brief overview of the relation between inflation and saving behavior in other Western-type economic systems, including a number of Western European countries, Canada, and Japan. In the fourth part I have a brief discussion about the relation between uncertainty, inflation, and future economic growth.

Up until a few years ago, it was generally taken for granted by economists that the appropriate framework for analyzing consumer reactions to inflation was represented by the hyperinflation experience found occasionally in European economies during the past. During hyperinflation, behavioral responses are unambiguous and entirely understandable: Consumers rush to transform goods into money because the value of money is dropping monthly, weekly, daily, or even hourly in extreme cases. In the fact of such change in prices, the only sensible reaction is to hold as little money as possible for a short a period of time as possible, and to convert money into goods as quickly as can be accomplished. But in situations where the rate of price inflation is better characterized by terms like moderate than terms like hyper, the world is more complicated than that.

Recent analysis suggests three types of theoretical considerations relating to the behavioral response between inflation and spending/saving. The first is the classical response: Inflation produces incentives to substitute goods for money, and thus to reduce the ratio of saving to income. Attempts to reduce the saving ratio may, of course, not be successful, simply because there are timelags between the receipt of income and its expenditure. But the incentives clearly go in the direction of reduced saving.

A second type of reaction, which goes in the same direction, is based on the proposition that people may be fooled by inflation into feeling that they are richer than they really are. When money incomes rise in an inflationary environment, consumers may feel wealthier because they have larger paychecks; feeling wealthier, they may decide to spend more in consequence. It is a well-developed theoretical and empirical proposition that greater wealth induces greater consumption spending, and the illusion of greater wealth can be just as effective in promoting that response as the fact.

The third behavioral response goes in the opposite direction, and tends to mean that consumers see themselves as having greater incentives to save. This effect, which has been the focus of much of my own recent research on consumer behavior, can be categorized as an uncertainty effect. The basic argument is simply that during periods of price inflation that are high by historical standards, both prices and money incomes rise at variable rates which are hard to foresee perfectly and form an uncertain basis for planning. Consumers see prices rising with a high degree of certainty but with an unknown rate of increase, see their money income as prospectively rising but with considerable uncertainty as to whether the income increase will keep pace with

prices, and are apt to choose a more cautious expenditure path in consequence.

The rationale for this behavioral response, at bottom, is simply that the costs of guessing wrong on the probable rate of increase of money income relative to prices are not symmetrical. If consumers guess that their money income will outpace inflation and spend accordingly, and if it turns out that they were wrong, they end up with commitments made in the anticipation of a higher income increase than actually materialized and a very tight constraint on their ability to maintain living standards at accustomed levels. On the other hand, if it turns out that money income actually grows more rapidly than they had guessed, all they have lost is the opportunity to consume at somewhat more favorable prices—those prevailing earlier—than the ones they now face. But losing a favorable consumption opportunity does not create the kind of uncomfortable and constrained financial situation faced by consumers who have made spending plans on the assumption of a 10-percent money income increase and ended up with 5 percent instead.

The uncertainty effects of inflation on consumer behavior can be summed up by noting that consumers must guess about a joint distribution of money income change and price change, and in an environment where inflation rates are high and variable, consumers will often choose not to gamble on money wages keeping pace with or exceeding price increases. After the fact, it will turn out that many consumers have in fact fared better than they had feared. But all that means is that consumer caution in the face of uncertain real income change has resulted in a higher realized rate of saving than would have been the case if consumers had been certain instead of uncertain.

There is a fair amount of empirical evidence that can be brought to bear on this issue, both of a cross section sort and of a time series sort. As is usually the case, the time series evidence is more ambiguous, although it tends to go in the same direction as the cross section evidence.

Over the last several years, the Survey Research Center at the Institute for Social Research, University of Michigan, has included a question on consumers reactions to inflation in a number of its regular quarterly and monthly surveys. The question is: "When prices go up, some people buy things they need before prices go up further, while others react by trying to cut down on their spending because they are worried about making ends meet. What do you do when prices go up?"

Table 1, in my prepared statement, shows how consumers have answered that question on the occasions where it has been asked over the last several years. The first observation is from the August-September survey of 1974, while the most recent one is from the February 1978 survey. The relationship that stands out most clearly in the table is the preponderance of the consumers who report that their reactions to inflation is to cut back on spending. By a ratio of something like 4- or 5-to-1, the dominant reaction of American consumers to inflation, according to these data, is to cut down on spending rather than to buy before prices go up. There has been very little change over time in the nature of this conservative reaction to price

inflation, and the table does not have any story relating to change over time. But during the entire period from late 1974 through the early part of 1978, when inflation rates have varied from the double-digit rates prevailing in more recent years, consumers have dominantly reported that an appropriate response, in their view, to inflation is to cut back on spending, rather than to buy in advance of rising prices.

The time series evidence is obtained by examining models of savings behavior which include variables designed to measure the real income uncertainty associated with high inflation rates. Although the results vary somewhat depending on the time period and the way in which the variables are measured, it has consistently been true that measures of expected price change have been significantly and positively associated with the personal saving rate in the U.S. economy. The strongest such evidence comes from econometric equations estimated over the period 1955 through the middle of the 1970's. Table 2, in my prepared statement, presents a number of such equations. The message from the price expectation variables in the table is that rising inflation rates are associated with higher savings rates, falling inflation rates tend to be associated with falling saving rates, and stable inflation seems not to have much impact on savings since the sum of the relevant lagged price coefficient tends to be close to zero.

During the last few months, the basic data on expected price change obtained from surveys conducted at the Institute for Social Research have been substantially revised and improved. In addition, we have made some comparisons between estimates of expected price change obtained from consumers, which seems to me the appropriate base for a measure of real income uncertainty, and estimates of expected price change obtained from asking the opinions of professional economic forecasters. Charts 1 and 2, in my prepared statement, show some of the basic findings. On chart 1, the original estimate—on which the table 2 equations are based—is presented as a dashed line, while the new estimate is shown as a solid line. The new revision has a time profile much like the original data, although the revised estimate of average expected price change has a much higher level and is more consistent with actual price changes. In 1974, for example, estimates of average expected price change got to the appropriate double-digit level, while during recent years the new expected price change variable has been tracking in the 6- to 7-percent zone.

Chart 2 compares the Michigan data, which are obtained from consumers, with data obtained by the financial columnist Joseph Livingston from a panel of professional economic forecasters. The date in chart 2 are not average expected price change, but the variation among the population is expectations about price change. In much of the analysis done with these data, it turns out that variation among the population is a better measure of uncertainty than the average expected price change, the argument being that the more variation among consumers in expectations about price change the more uncertain consumers are about future price change. What chart 2 demonstrates clearly is that variation in consumer expectations about price change is significantly higher during the late 1960's and 1970's than it had been during the 1950's and early 1960's, while for the professional economists, variation was little different during the entire period from

the late 1950's through the late 1970's. For analyzing behavior, I have a strong preference for working with the expectations of economic actors—consumers—than with the expectations of economic observers—professional forecasters.

One may ask whether time-series evidence of this sort is of any help in making guesses about the future reactions of consumers. It is certainly true that many time series relationships found in econometric models seem to provide better explanations of the past than accurate forecasts of the future. Unfortunately, one has to have the same skepticism regarding these results. By and large, the time-series evidence just discussed is heavily influenced by the nature of the 1970's, a period characterized by both high-inflation rates and high-saving rates. Even if it were true that causality was unambiguous—that high-saving rates resulted from high-inflation rates—it by no means follows that a future bout of inflation along the lines of the 1973–76 experience would produce the same impact on saving rates. In fact, there is some presumption that it would not, and that the very strong impact of the 1973–74 inflationary episode on saving rates would be an overestimate of what is likely to happen in future if the same kind of price development takes place. Consumers, like others, learn from experience. Many people must have feared that double-digit inflation rates would seriously depress their real income, and that fear, while it was certainly realized during 1974, would not have been borne out from 1975 through 1977 when relatively high-inflation rates were associated with at least some continued growth in real income. Thus consumers may be less concerned than they had been in the past with the possible impact of high-inflation rates on real income growth, and if that is the root cause of their behavioral response, that response may be significantly muted.

While the overall reaction of consumers to price inflation seems best described by the preceding discussion, there is a recent phenomenon in the survey data which suggests the importance of distinguishing reactions to generalized inflation with reactions to prospective increases in the prices of particular products, especially major items like houses, cars, and durables. During the past year, there is a considerable amount of evidence from the Michigan surveys that consumers perceive the advantages of speeding up purchases of houses, cars, and durables before prices on these products rise still further, a reaction which clearly tends to mitigate the relation between expectations of inflation generally and spending/saving behavior. The Michigan surveys have for a long time asked people whether they thought it was a good or bad time to buy houses, cars, and major durables, followed by questions about why people felt that way. In the 1960's, it was commonplace for people to associate the opinion that it was a good time to buy with the perception that prices were low and good buys were available. But in the 1970's, it is more often true that the opinion "this is a good time to buy" is held because consumers expect prices of houses, cars, and other major products to be higher in the future.

On the evidence as I read it, the typical result of high-inflation rates is increased, not decreased personal saving. The reason is that high-inflation rates are associated with a relatively high degree of uncer-

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tainty about future real income growth; thus consumers tend to react cautiously to inflation and attempt to build up assets, hold back debt, and in general save more than would otherwise be the case. Anticipatory buying can, and in recent quarters has, modified this general effect but must be seen as an inherently temporary phenomenon. Finally, the historical relation between inflation rates and saving may not be fully valid as a predictor of future behavioral responses, since the concerns of the consumer evidenced in past time-series relationships may not hold up in the future. I will go into this later. Now I want to talk about some more generalized psychological reactions.

There seems to be little doubt that inflation is one of the least popular events in U.S. economic life. Although economists have often argued that the costs of inflation are greatly overdone because no real resources are involved in the aggregate and all that happens is that there are some gainers and some losers, it seems to be true that consumers generally perceive that inflation does them a good bit of damage.

Perhaps the simplest way to see that is to observe the nature of subjective perceptions of inflation as it affects real income. The top half of table 3 in my prepared statement contains data on consumer responses to a question about whether their income went up more or less than prices during the past 12 months, while the bottom half contains similar data on whether consumers expect income to go up more or less than prices during the next 12 months. Although these data are qualitative, they convey an unambiguous message: Most consumers think that prices have gone up substantially more than income during every 1 of the last 5 years, and a similar preponderant majority of consumers expect that prices will go up more than their income in the future.

These data are, of course, not consistent with aggregate data, which indicates that over the same period consumers have just held even in the aggregate—perhaps gained a bit, depending on which time period is used. But consumers' negative reaction to inflation is easily understood once the data in table 3 are examined, since people clearly feel that they are being cheated by inflation, and that their living standards are being eroded significantly.

I am skipping the paragraph in reference to table 4 in my prepared statement, which is less interesting, I think.

It is not difficult to understand why reactions of this sort would be observed among American consumers. It is a widely documented fact that consumers see price increases as inflationary but do not so regard wage increases. A typical response is that wage increases are due to hard work, merit, and represent the proper reward for effort, but price increases simply represent an erosion of those hard-won gains. Even when both have the same basic cause, consumers clearly do not see the world that way. Psychologically, what probably tends to happen is that people always see price increases as reducing their real income, and on those infrequent occasions when money wage increases come along, that is seen as simply a catching up of ground that had been previously lost. Since losing ground to inflation is a continuous process, taking place week-by-week and month-by-month, while catching up happens rather more infrequently, it is not surprising that the dominant view of U.S. consumers is that inflation does

and has eroded their real income, and there is a widespread expectation that such erosion will continue.

Let us turn to other countries. I have little data here, but there is more available.

Our confidence in a behavioral relationship between inflation and consumer spending/saving would be enhanced if the kind of relationship found in the United States also appeared to hold in other economies. Although this is a subject now under investigation by myself and several colleagues at the Institute for Social Research, just a brief scanning of the gross changes over time in saving rates in Western Europe, Canada, and Japan along with changes in the Consumer Price Index clearly suggest that the same phenomenon is at work there as appears to be at work within the United States. As a first look at the problem, we have compared rates of personal saving, either quarterly or annually depending on the country, to changes in the Consumer Price Index for the same period. What typically shows up in these comparisons is that saving rates in virtually all Western-type economies, with one exception, are significantly higher now than they were a few years back, and the association in the time series between saving rates and changes in the Consumer Price Index appears on casual inspection to be quite strong.

From the available date on consumer expectations and attitudes, the most easily documented generalization is that consumers equate high rates of price inflation with unsatisfactory economic performance. Much of the evidence is consistent with the view that the negative association between inflation and economic well-being is not closely related to objective economic circumstances; that is, the survey evidence seems generally consistent with the view that even favorable economic performance measured in objective terms is seen negatively when it takes place in an inflationary environment.

In part, this consistently negative view about inflation may tend to result from the historically valid generalization that periods of inflation tend to be periods of unsatisfactory real economic growth. Thus, consumers may be expressing the view that an inflationary environment is one which either is or will shortly be associated with objectively poor economic circumstances, rather simply than reacting to an uncomfortable world of perceptible and continuous price increases.

On the whole, there seems little doubt that a typical consumer view of price inflation is that it cheats them of real income gains that would otherwise have been obtained. There is dominantly a psychological reaction, and it does not necessarily have behavioral consequences; people may act in much the same way whether they are content with economic developments or resentful of them. But the evidence seems reasonably convincing that inflation does have behavioral consequences for consumers, primarily that of creating a high degree of uncertainty about future real economic progress, and generally tending to induce caution and conservatism in purchase behavior.

While uncertainty-induced caution may be the dominant reaction of U.S. consumers to inflation, there appear to be certain markets in which the opposite reaction is observed. The best case in point is probably housing, where rapidly rising housing prices seem to have resulted in considerable strength for the owner-occupied housing market generally, and in an associated rapid increase in housing mortgage

debt. Probably the best way to view the response of consumers to rising prices for housing is that it impacts strongly on what is basically an investment or portfolio decision—consumers faced with rising housing prices are quite apt to judge that housing constitutes a much better place to put assets than other alternatives, with the consequent expectations-based house purchase behavior serving to push up housing prices faster than otherwise.

It is important to note that the data are more consistent with the view that changes in inflation rates are associated with behavioral responses than that the level of inflation rates is so related. For example, the rapid increase in saving rates during the early 1970's seems to be better explained by the fact that inflation rates were rising than that inflation rates were high, and the subsequent decline from double-digit inflation rates to the present approximately 6-percent zone was associated with a decline in saving rates back down toward historical norms. Moreover, whether any future inflationary surge would create the same saving behavior response seems doubtful: a plausible scenario would call for a relatively modest rise in the saving rate in the event of an inflationary episode such as the one we experienced between 1972 and 1974.

Finally, there is some limited evidence from the survey data, which needs to be carefully checked against available objective data, suggesting that inflation rates tend to generate increased variation in the distribution of real income change among U.S. households. In the past, both low- and high-income consumers have typically reported about the same perceptions of real income progress during economic expansions. During the expansion following the 1973–75 recession, however, low-income consumers report having fared less well than high-income consumers. Given that we know from other data that high-inflation rates generally tend to produce a strong perceptual bias with respect to perceived and actual real income changes, it does not necessarily follow that higher income families have actually benefited more in this inflationary environment than their low-income counterparts.

[The prepared statement of Mr. Juster follows:]

Prepared Statement of F. Thomas Juster

I appreciate this opportunity to appear before the Joint Economic Committee to discuss the relation between inflation and consumer behavior. The subject is important, and the way inflation is perceived by consumers and the way it affects their behavior is often misunderstood.

My comments are in four sections. First, there is a discussion of the behavorial relationship between inflation and consumer spending/saving behavior. Both theoretical considerations and empirical evidence are presented. Part II contains a discussion of psychological reactions to inflation. In particular, data on consumer perceptions of real income change in an inflationary environment are presented, as are data on the degree of concern among consumers on the important social problems of inflation and unemployment. The third part presents a brief overview of the relation between inflation and saving behavior in other western-type economic systems, including a number of western European countries, Canada and Japan. In the fourth part I have a brief discussion about the relation between uncertainty, inflation and future economic growth.

I. Inflation and Consumer Behavior: The Evidence on Behavioral Relationships

Up until a few years ago, it was generally taken for granted by economists that the appropriate framework for analyzing consumer reactions to inflation was represented by the hyper-inflation experience found occasionally in Euro-

pean economies during the past. During hyper-inflation, behavioral responses are unambiguous and entirely understandable: consumers rush to transform goods into money because the value of money is dropping monthly, weekly, daily or even hourly in extreme cases. In the face of such change in prices, the only sensible reaction is to hold as little money as possible for as short a period of time as possible, and to convert money into goods as quickly as can be accomplished. But in situations where the rate of price inflation is better characterized by terms like moderate than terms like hyper, the world is more complicated than that.

Recent analysis suggests three types of theoretical considerations relating to the behavioral response between inflation and spending/saving behavior. The first is the classical response—inflation produces incentives to substitute goods for money, and thus to reduce the ratio of saving to income. Attempts to reduce the saving ratio may of course not be successful, simply because there are time lags between the receipt of income and its expenditure. But the incentives clearly go in the direction of reduced saving.

A second type of reaction, which goes in the same direction, is based on the proposition that people may be fooled by inflation into feeling that they are richer than they really are. When money incomes rise in an inflationary environment, consumers may feel wealthier because they have larger paychecks; feeling wealthier, they decide to spend more in consequence. It is a well developed theoretical and empirical proposition that greater wealth induces greater consumption spending, and the illusion of greater wealth can be just as effective in promoting that response as the fact.

The third behavioral response goes in the opposite direction, and tends to mean that consumers see themselves as having greater incentives to save. This effect, which has been the focus of much of my own recent research on consumer behavior, can be categorized as an uncertainty effect. The basic argument is simply that during periods of price inflation that are high by historical standards, both prices and money incomes rise at variable rates which are hard to foresee perfectly and form an uncertain basis for planning. Consumers see prices rising with a high degree of certainty but with an unknown rate of increase, see their money income as prospectively rising but with considerable uncertainty as to whether the income increase will keep pace with prices, and are apt to choose a more cautious expenditure path in consequence.

The rationale for this behavioral response, at bottom, is simply that the costs of guessing wrong on the probable rate of increase of money income relative to prices are not symmetrical. If consumers guess that their money income will outpace inflation ond spend accordingly, and if it turns out that they were wrong, they end up with commitments made in anticipation of a higher income increase than actually materialized and a very tight constraint on their ability to maintain living standards at accustomed levels. On the other hand, if it turns out that money income actually grows more rapidly than they had guessed, all they have lost is the opportunity to consume at somewhat more favorable prices. But losing a favorable consumption opportunity does not create the kind of uncomfortable and constrained financial situation faced by consumers who have made spending plans on the assumption of a 10 percent money income increase and ended up with five percent instead.

One might ask why uncertainty about the relation between income change and price change is not just as compelling at zero or very low rates of price inflation. The answer apparently is that zero or very low rates of price inflation virtually guarantee real income increases for the vast majority of Americans. In our society, money wage rates hardly ever decline, hence real wages also hardly ever decline to zero rates of price inflation. But at relatively high and variable rates of price inflation, real wages can decline even though money wages do not, simply because money wages can rise less rapidly than prices if the latter are rising rapidly enough.

The uncertainty effects of inflation on consumer behavior can be summed up by noting that consumers must guess about a joint distribution of money income change and price change, and in an environment where inflation rates are high and variable, consumers will often choose not to gamble on money wages keeping pace with or exceeding price increases. After the fact, it will turn out that many consumers have in fact fared better than they had feared. But all that means is that consumer caution in the face of uncertain real income change has resulted in a higher realized rate of saving than would otherwise have been the case.

A fair amount of empirical evidence can be brought to bear on this issue, both cross-section and time-series. As is usually the case, the time-series evidence is more ambiguous, although it tends to go in the same direction as the cross-section evidence.

Over the last several years, the Survey Research Center at the Institute for Social Research, University of Michigan, has included a question on consumer reactions to inflation in a number of its regular quarterly and monthly surveys. The question is: "When prices go up, some people buy things they need before prices go up further, while others react by trying to cut down on their spending because they are worried about making ends meet. What do you do when prices go up?"

Table 1 shows how consumers have answered that question on the occasions where it has been asked over the last several years. The first observation is from the August–September Survey of 1974, while the most recent one is from the February 1978 Survey. The relationship that stands out most clearly in the table is the preponderance of consumers who report that their reaction to inflation is to cut back on spending. By ratio of something like four- or five-to-one, the dominant reaction of American consumers to inflation, according to these data, is to cut down on spending rahter than to buy before prices go up. There has been very little change over time in the nature of this conservative reaction to price inflation, and the table does not have any story relating to change over time. But during the entire period from late 1974 through the early part of 1978, when inflation rates have varied from the double-digit rates prevailing during 1974 to the five–seven percent inflation rates in more recent years, consumers have dominantly reported that an appropriate response to inflation is to cut back on spending, rather than to buy in advance of rising prices.

The time-series evidence is obtained by examining models of savings behavior which include variables designed to measure the real income uncertainty associated with high inflation rates. Although the results vary somewhat depending on the time period and the way in which the variables are measured, it has consistently been true that measures of expected price change have been significantly and positively associated with the personal saving rate in the U.S. economy. The strongest such evidence comes from econometric equations estimated over the period 1955 through the middle of the 1970's. Table 2 presents a number of such equations. The message from the price expectation variables in the table is that rising inflation rates are associated with higher saving rates, falling inflation rates tend to be associated with falling saving rates, and stable inflation seems not to have much impact on saving since the sum of the relevant lagged price coefficient tends to be close to zero.

During the last few months, the basic data on expected price change obtained from surveys conducted at the Institute for Social Research have been substantially revised and improved. In addition, we have made some comparisons between estimates of expected price change obtained from consumers, which seems to me the appropriate base for a measure of real income uncertainty, and estimates of expected price change obtained from asking the opinions of professional economic forecasters. Charts 1 and 2 show some of the basic findings. In Chart 1, the original estimate (on which the Table 2 equations are based) is presented as a dashed line, while the new estimate is shown as a solid line. The new revision has a time profile much like the original data, although the revised estimate of average expected price change has a much higher level and is more consistent with actual price changes. In 1974, for example, estimates of average expected price change got to the appropriate double-digit level, while during recent years the new expected price change variable has been tracking in the six-seven percent zone.

Chart 2 compares the Michigan data, which are obtained from consumers, with data obtained by the financial columnist Joseph Livingston from a panel of professional economic forecasters. The data in Chart 2 are not average expected price change, but the variation among the population in expectations about price change. In much of the analysis done with these data, it turns out that variation among the population is a better measure of uncertainty than the average expected price change, the argument being that the more variation among consumers in expectations about price change the more uncertain consumers are about future price change. What Chart 2 demonstrates clearly is that variation in consumer expectations about price change is significantly higher during the late 1960's and 1970's than it had been during the 1950's and early 1960's, while

for the professional economists, variation was little different during the entire period from the late 1950's through the late 1970's. For analyzing behavior, I have a strong preference for working with the expectations of economic actors (consumers) than with the expectations of economic observors (professional forecasters).

One may ask whether time-series evidence of this sort is of any use in making guesses about the future reactions of consumers. It is certainly true that many time-series relationships found in econometric models seem to provide better explanations of the past than accurate forecasts of the future. Unfortunately, one has to have the same skepticism regarding these results. By and large, the time-series evidence just discussed is heavily influenced by the nature of the 1970's, a period characterized by both high inflation rates and high saving rates. Even if it were true that causality was unambiguous—that high saving rates resulted from high inflation rates—it by no means follows that a future bout of inflation along the lines of the 1973–76 experience would produce the same impact on saving rates. In fact, there is some presumption that it would not, and that the very strong impact of the 1973–74 inflationary episode on saving rates would be an overestimate of what is likely to happen in future if the same kind of price development takes place. Consumers, like others, learn from experience. Many people must have feared that double-digit inflation rates would seriously depress their real income, and that fear, while it was certainly realized during 1974, would not have been borne out from 1975 through 1977 when relatively high inflation rates were associated with at least some continued growth in real income. Thus consumers may be less concerned than they had been in the past with the possible impact of high inflation rates on real income growth, and if that is the root cause of their behavioral response, that response may be significantly muted.

While the overall reaction of consumers to price inflation seems best described by the preceding discusion, there is a recent phenomenon in the survey data which suggests the importance of distinguishing reactions to generalized inflation from reactions to prospective increases in the prices of particular products, especially major items like houses, cars and durables. During the past year, there has been a considerable amount of evidence from the Michigan surveys that consumers perceive the advantages of speeding up purchases of houses, cars and durables before prices on these products rise still further, a reaction which clearly tends to mitigate the relation between expectations of inflation generally and spending/saving behavior. The Michigan surveys have for a long time asked people whether they thought it was a good or bad time to buy houses, cars and major durables, followed by questions about why people felt that way. In the 1960's it was commonplace for people to associate the option that it was a good time to buy with the perception that prices were low and good buys were available. But in the 1970's, it is more often true that the opinion "this is a good time to buy" is held because consumers expect prices of houses, cars and other major products to be higher in the future.

During recent months the combined effect of these various forces has been to maintain consumer spending at about a typical relation with income, in the face of deteriorating expectations about the business environment and some evidence of heightened concern over inflation. In part, the explanation for the current moderate strength in consumption lies in relatively high purchase rates for housing and autos, with an associated relatively large increase in debt, fueled by an expectation of rising prices for these specific products. The risk for the economy is that purchases made in anticipation of future price increases clearly borrow sales from the future. The likely outcome is weaker consumer demand in future, since buying in advance of expected price increases is inherently a tran sitory phenomenon.

Summary of Behavioral Relations for the U.S.

On the evidence as I read it, the typical result of high inflation rates is increased, not decreased personal saving. The reason is that high inflation rates are associated with a relatively high degree of uncertainty about future real income growth; thus consumers tend to react cautiously to inflation and attempt to build up assets, hold back debt, and in general save more than would otherwise be the case. Anticipatory buying can, and in recent quarters has, modified this general effect but must be seen as an inherently temporary phenomenon. Finally, the historical relation between inflation rates and saving may not be fully valid as

a predictor of future behavioral responses, since the concerns of the consumer evidenced in past time-series relationships may not hold up in the future.

II. PSYCHOLOGICAL REACTIONS TO INFLATION

There seems to be little doubt that inflation is one of the least popular events in U.S. economic life. Although economists have often argued that the costs of inflation are greatly overdone because no real resources are involved in the aggregate and all that happens is that here are some gainers and some losers, it seems to be true that consumers generally perceive that inflation does them a good bit of damage.

Perhaps the simplest way to see that is to observe the nature of subjective perceptions of inflation as it affects real income. The top half of Table 3 contains data on consumer responses to a question about whether their income went up more or less than prices during the past 12 months, while the bottom half contains similar data on whether consumers expect income to go up more or less than prices during the next 12 months. Although these data are qualitative, they convey an unambiguous message: most consumers think that prices have gone up substantially more than income during every one of the last five years, and a similar preponderant majority of consumers expect that prices will go up more than their income in the future.

These data are of course not consistent with aggregate data, which indicates that over the same period consumers have just about held even in the aggregate—perhaps gained a bit, depending on which time period is used. But consumers' negative reaction to inflation is easily understood once the data in Table 3 are examined, since people clearly feel that they are being cheated by inflation, and that their living standards are being eroded significantly.

Table 4 contains somewhat different kinds of data. Here we present the distributions over time of consumer responses to a question about whether inflation or unemployment is the more serious social problem. This was not a question concerning their own personal situation—that is, people were not being asked whether inflation or unemployment was more serious for them, but rather whether they thought inflation or unemployment was a more serious problem generally. As Table 4 shows, inflation has typically been viewed by consumers as the more serious problem, except during the depths of the 1974–75 recession when unemployment got more votes as "worst" than did inflation. In recent months, inflation seems to have been making some gains, relative to unemployment, as "public enemy number one."

It is not difficult to understand why reactions of this sort would be observed among American consumers. It is a widely documented fact that consumers see price increases as inflationary but do not so regard wage increases. A typical response is that wage increases are due to hard work, merit, and represent the proper reward for effort, but price increases simply represent an erosion of those hard-won gains. Even when both have the same basic cause, consumers clearly do not see the world that way. Psychologically, what probably tends to happen is that people always see price increases as reducing their real income, and on those infrequent occasions when money wage increases come along, that is seen as simply a catching up of ground that had been previously lost. Since losing ground to inflation is a continuous process, taking place week-by-week and month-by-month, while catching up happens rather more infrequently, it is not surprising that the dominant view of U.S. consumers is that inflation does and has eroded their real income, and there is a widespread expectation that such erosion will continue.

III. INFLATION-SAVING RELATIONSHIPS OUTSIDE THE U.S.

Our confidence in a behavioral relationship between inflation and consumer spending/saving would be enhanced if the kind of relationship found in the U.S. also appeared to hold in other economies. Although this is a subject now under investigation by myself and several colleagues at the Institute for Social Research, just a brief scanning of the gross changes over time in saving rates in western Europe, Canada and Japan along with changes in the Consumer Price Index clearly suggest that the same phenomenon is at work there as appears to be at work within the U.S. As a first look at the problem, we have compared rates of personal saving, either quarterly or annually depending on the country, to changes in the Consumer Price Index for the same period. What typically shows up in these comparisons is that saving rates in virtually all western-type economies, with one exception, are significantly higher now than

they were a few years back, and the association between saving rates and changes in the Consumer Price Index appears on casual inspection to be quite strong.

While a brief overview of data like these is not a substitute for careful modeling and detailed analysis, it does provide some additional evidence that the inhibiting effect of inflation rates on consumer spending also seems to be present outside the United States.

IV. GENERAL CONSIDERATIONS

From the available data on consumer expectations and attitudes, the most easily documented generalization is that consumers equate high rates of price inflation with unsatisfactory economic performance. Much of the evidence is consistent with the view that the negative association between inflation and economic well-being is not closely related to objective economic circumstances: that is, the survey evidence seems generally consistent with the view that even favorable economic performance measured in objective terms is seen negatively when it takes place in an inflationary environment.

In part, this consistently negative view about inflation may tend to result from the historically valid generalization that periods of inflation tend to be periods of unsatisfactory real economic growth. Thus consumers may be expressing the view that an inflationary environment is one which either is or will shortly be associated with objectively poor economic circumstances, rather that reacting to an uncomfortable world of perceptible and continuous price increases.

On the whole, there seems little doubt that a typical consumer view of price inflation is that it cheats them of real income gains that would othrwise have been obtained. That is dominantly a psychological reaction, and it does not necessarily have behavioral consequences: people may act in much the same way whether they are content with economic developments or resentful of them. But the evidence seems reasonably convincing that inflation does have behavioral consequences for consumers, primarily that of creating a high degree of uncertainty about future real economic progress, and generally tending to induce caution and conservatism in purchase behavior.

While uncertainty-induced caution may be the dominant reaction of U.S. consumers to inflation, there appear to be certain markets in which the opposite reaction is observed. The best case in point is probably housing, where rapidly rising housing prices seem to have resulted in considerable strength for the owner-occupied housing market generally, and in an associated rapid increase in housing mortgage debt. Probably the best way to view the response of consumers to rising prices for housing is that it impacts strongly on what is basically an investment or portfolio decision—consumers faced with rising housing prices are quite apt to judge that housing constitutes a much better place to put assets than other alternatives, with the consequent expectations-based house purchase behavior serving to push up housing prices faster than otherwise.

It is important to note that the data are more consistent with the view that changes in inflation rates are related to saving behavior than that the level of inflation rates is so related. For example, the rapid increase in saving rates during the early 1970's seems to be better explained by the fact that inflation rates were rising than that inflation rates were high, and the subsequent decline from double-digit inflation rates to the present approximately six percent zone was associated with a decline in saving rates back down toward historical norms. Moreover, whether any future inflationary surge would create the same behavior response seems doubtful: a plausible scenario would call for a relatively modest rise in the savings rate in the events of an inflationary episode such as the one we experienced between 1972 and 1974.

There is some limited evidence from the survey data, which needs to be carefully checked against available objective data, suggesting that inflation rates tend to generate increased variation in the distribution of real income change among U.S. households. In the past, both low- and high-income consumers have typically reported about the same perceptions of real income progress during economic expansions. During the expansion following the 1973–75 recession, however, low-income consumers report having fared less well than high-income consumers. Given that we know from other data that high inflation rates generally tend to produce a strong perceptual bias with respect to perceived and actual real income changes, it does not necessarily follow that higher income families have actually benefited more in this inflationary environment than their low-income counterparts.

TABLE 1.—SUBJECTIVE CONSUMER REACTION TO PRICE INFLATION

Response category [1]	August–September 1974	May 1975	August–September 1975	February 1976	August–September 1976	May 1977	August-September 1977	October–November 1977	February 1978
Buy before prices go up	13	8	9	8	11	10	8	10	10
Retrench on spending	54	56	65	52	43	49	47	51	46
Both	5	3	5	4	6	5	4	5	7
Buy essentials only	19	21	9	23	26	20	25	15	24
Neither	5	6	7	9	11	13	11	15	11
DK, NA	4	6	5	4	3	3	5	4	2

[1] The question is as follows: "When prices go up, some people buy things they need before prices go up further, while others react by trying to cut down on their spending because they are worried about making ends meet. What do you do when prices go up?"

TABLE 2.—REGRESSION DATA FOR SAVINGS EQUATIONS[a] DEPENDENT VARIABLE: SAVING PER HOUSEHOLD (1972 DOLLARS)

Regression coefficients (standard errors)	1955–74:4		1955–76:3		1955–76:3	
	Equation 1	Equation 1A	Equation 2	Equation 2A	Equation 3	Equation 3A
S_{-1}	**0.88 (.05)	**0.98 (.01)	**0.91 (.05)	**0.98 (.01)	**0.88 (.05)	**0.98 (.010)
ΔL	**.36 (.09)	**.37 (.09)	**.40 (.09)	**.41 (.08)	**.36 (.09)	**.38 (.09)
ΔP	**.61 (.20)	**.66 (.20)	**.72 (.18)	**.71 (.17)	*.60 (.18)	**.65 (.18)
ΔTAX	**.78 (.13)	**—.83 (.14)	—**.83 (.09)	**—.91 (.08)	—**.76 (.12)	**—.93 (.11)
ΔSI	*—.88 (.42)	**—1.47 (.42)	**1.12 (.41)	**—1.58 (.41)	*—.88 (.40)	**—1.47 (.41)
ΔTR	**.80 (.18)	**.87 (.19)	**.67 (.18)	**.77 (.17)	**.77 (.18)	**.82 (.18)
VAR_{-1}	*.043 (.018)		*.033 (.014)		*.044 (.01)	
VAR_{-2}	.002 (.024)		—.001 (.014)		—.012 (.02)	
VAR_{-3}	.012 (.021)		.017 (.017)		.019 (.02)	
VAR_{-4}	*—.043 (.020)		**—.037 (.014)		*—.033 (.01)	
ICS	—.0026 (.0016)		*—.0030 (.0014)		*—.003 (.001)	
ICS_{-1}	.0029 (.0016)		*.0032 (.0014)		*.003 (.001)	
ΔVAR		*.11 (.04)		**.11 (.03)		*.10 (.03)
$FICS_{-3}$		—.004 (.002)		—.003 (.002)		—.003 (.002)
$D64_{-1}$					.031 (.05)	.037 (.05)
D64					—.037 (.05)	—.056 (.05)
$D68_{-1}$					.021 (.05)	.041 (.05)
D68					—.013 (.02)	—.008 (.02)
$D75_{-1}$					**—.19 (.06)	—.098 (.06)
D75					.039 (.09)	—.021 (.08)
SE	.048	.050	.050	.050	.048	.050
$\bar{R}^2$	.929	.923	.929	.928	.941	.933
ΣVAR	.014		.012		.018	

[a] Regression coefficients marked with an (*) are statistically significant at the 5-percent level; those marked (**) are significant at the 1-percent level. The standard error of estimate in these equations is measured in terms of thousands of dollars per household. The corresponding standard error of estimate for the transformation of the dependent variable into aggregate dollars is roughly 3,000,000,000. That is, the equations in table 1 have standard errors of estimates of approximately $3,000,000,000 for saving measured in 1972 prices.

Variables are defined as follows:

S, S_{-1}, ΔL, ΔP, ΔTAX, ΔFICA, and ΔTR all represent deflated per household figures for, respectively, current saving, lagged saving, current change in labor income, current change in property income, current change in personal tax and nontax payments, current change in FICA payments by employees, and current change in transfer income. All these dollar magnitudes are calculated in constant prices, divided by the number of household units in the United States.

VAR_{-1}, VAR_{-2}, VAR_{-3}, and VAR_{-4} all represent estimates of the dispersion of expected price change among consumers, obtained from the quarterly surveys conducted by the University of Michigan's Survey Research Center. The dimensions of these numbers are actually the standard deviation in percentage points of the distribution of expected price change.

ICS and ICS_{-1} represent the current and lagged values of the survey research center's Index of Consumer Sentiment, derived from the quarterly surveys of consumer attitudes.

D64, $D64_{-1}$, D68, $D68_{-1}$, D75, and $D75_{-1}$ all represent dummy (1,0) variables reflecting the quarters in which major tax rate changes took effect, and the corresponding set of quarters just before these tax changes took effect.

ΔVAR is the first difference in a 4-quarter moving average of the variance (actually, standard deviation) of expected price change.

$FICS_{-3}$ is the first difference in the Index of Consumer Sentiment, adjusted by a filtering procedure. The procedure is described in Juster and Wachtel, "Anticipatory and Objective Models of Durable Goods Demand" (in appendix A), Explorations in Economic Research, fall 1974, and essentially consists of eliminating first differences which are neither large nor persistent.

TABLE 3.—PERCEPTIONS OF REAL INCOME CHANGE, ACTUAL, AND EXPECTED

	November–December 1973	August–September 1974	February 1975	May 1975	August–September 1975	February 1976	August–September 1976	October–November 1976	February 1977	May 1977	August–September 1977	November–December 1977	February 1978	May 1978
Income increase compared to price increase:														
PANEL A: ACTUAL CHANGE COMPARED TO PREVIOUS YEAR														
More	11	10	9	9	11	13	15	14	15	15	14	16	13	14
Same	26	25	24	28	29	28	31	29	27	31	30	34	31	25
Less	60	63	64	62	58	56	50	54	56	50	55	48	54	56
DK, NA	3	2	3	1	2	3	4	3	2	4	1	2	3	
PANEL B: EXPECTED CHANGE OVER NEXT YEAR Income change relative to price change:														
More		10	10	12	11	15	14	15	13	13	14	16	14	13
Same		32	36	39	39	42	43	44	42	46	46	46	42	36
Less		49	45	42	43	37	34	35	38	35	36	33	38	44
DK, NA		9	9	7	7	6	9	6	7	6	4	5	6	5

TABLE 4.—CONSUMER PERCEPTIONS OF INFLATION OR UNEMPLOYMENT AS SERIOUS PROBLEMS

Response category[1]	August–September[2] 1974	February 1975	May 1975	August–September 1975	October–November 1975	February 1976	May 1976	August–September 1976	October–November 1976	February 1977	May 1977	August–September 1977	November–December 1977	February 1978	May 1978
Inflation more serious	67	31	29	44	46	45	46	48	49	54	61	56	52	62	63
Unemployment more serious	25	59	64	39	36	37	37	39	38	35	30	32	37	26	26
Both equally serious	5	6	5	17	16	17	14	11	10	9	6	7	9	9	8
Neither serious	(1)	----------	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	1	----------	----------
DK, NA	3	4	2	0	2	1	3	2	3	2	3	5	1	3	3

[1] The question was as follows: Which of the 2 problems—unemployment or inflation—do you think will cause the more serious economic hardships for people during the next year or so?"

[2] Interviewing for some of the surveys covers a calendar period of more than 1 mo. For example, August–September.

Original and Revised Estimates, SRC Mean Expected Price Change

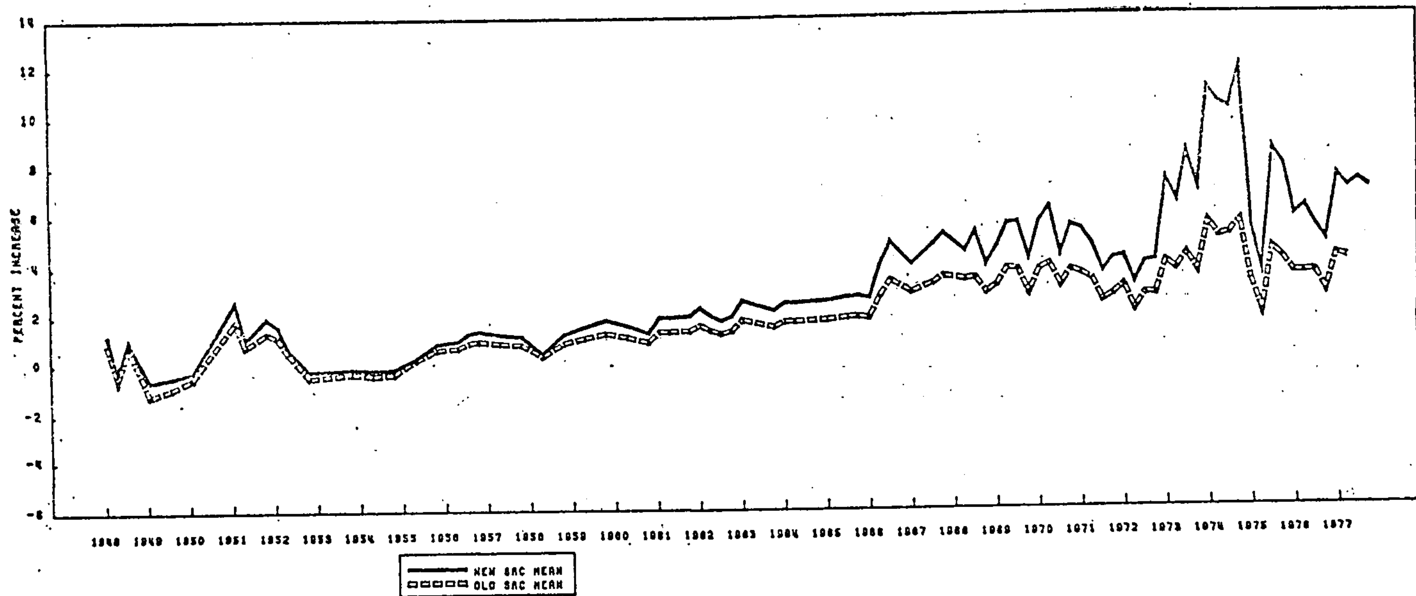

CHART 1

Standard Deviations of Expected Price Change Distributions, SRC and Livingston Data

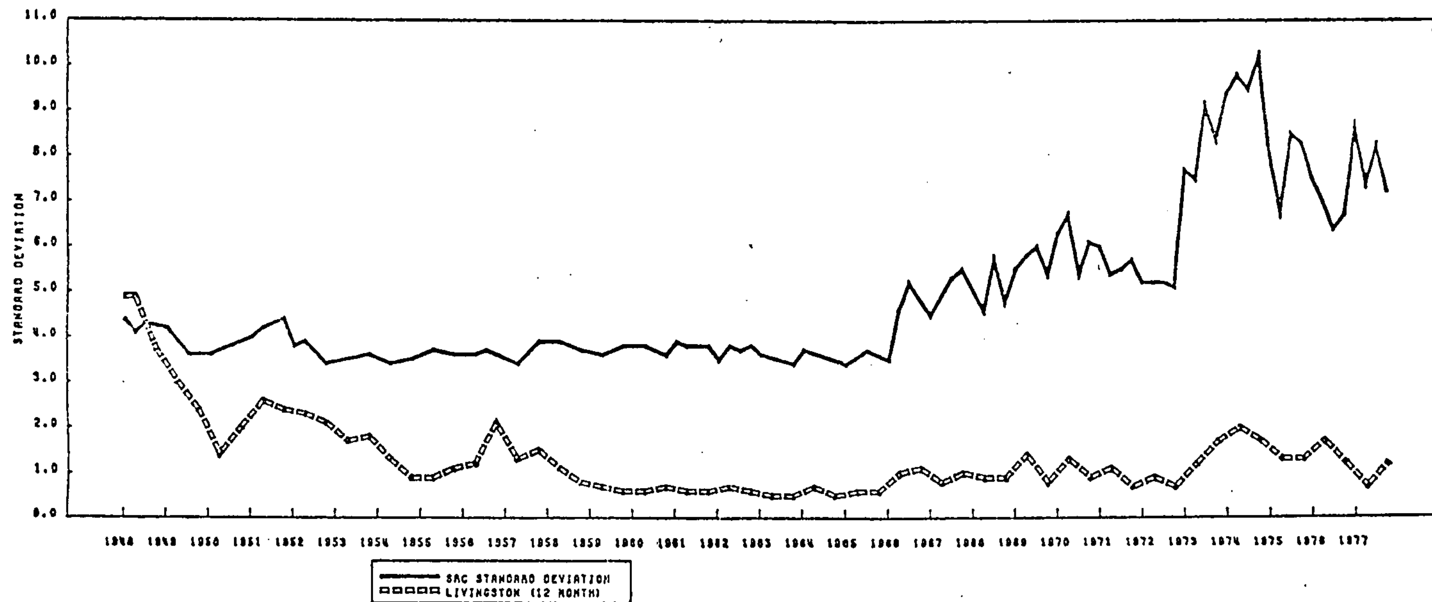

CHART 2

Mr. SHELDON. Thank you very much, Professor Juster.

We, of course, want to have not only questions from the staff of the Joint Economic Committee and its special study, but do invite all three of the panelists to ask questions or make comments on each other's statements as well. Mr. Ross has earned his full participation by filling in on short notice this way.

Mr. Ross do you have anything you would like to turn to first?

Mr. ROSS. As a matter of fact, I do. I have a couple of questions, perhaps one to Mr. Juster. I found that a fascinating prepared statement, one question though, to start things off. What is the effect of the incentive structures on inducing rational consumer behavior? For example. the investment in housing phenomena seems to me occur at least in part because of the tax shelter effects. Housing offers a rational purchaser a way of shielding his now artificially high income from taxes, and so it seems to make economic sense to jump into this situation because of the way we have drawn our present law. Can you take off on that point from your survey?

Mr. JUSTER. Well, I cannot take off from the survey; I can speculate on that. The tax shelter aspect has always been in the housing structure. That is not new, that has been there.

Mr. ROSS. It is particularly attractive now and even more as the mortgage rate goes up.

Mr. JUSTER. As money income rates rise——

Mr. ROSS. So you have this unfortunate dynamic, and I want to hone in on that point.

Mr. JUSTER. I understand, that is quite right. But I guess if I had to judge I would not really work from the survey. It is hard to examine that question from the survey evidence. I think I would place more emphasis on what is going on in the housing market. It is a simple fact that over the last decade if you were to ask yourself where is the best place in which to invest, if you had money, the obvious answer is property, housing. It is also obvious that in the conventional assets, buying securities, bonds, those have fared much worse than property investment, and, I think, what has happened is that people have become increasingly aware that the housing market is the best place to make their investment and they are aware of the attractiveness of the long-term capital gains aspects of housing investments.

As you properly suggest, that tendency would be strengthened by the fact that it has a tax-shelter aspect. However, I think it would take place independent of a tax shelter. If you look at the rates of return, they are very much on the negative on a lot of other things, and, in general, people tend to make their investments based on what went on in the past decade and not on the next decade. So that is the major explanation for the boom in the housing prices and in housing purchases.

The explanation for the mortgage thing, incidently, is a little different. I have been curious about that because there has been an enormous thrust in housing mortgage debt expenses just over the last year, really the last 9 months, since the middle of 1977. The explanation is apparently that people are becoming aware of the fact that with the inflation of housing prices their equity has grown. Therefore, they monetize that, and it is cheaper to buy things you would normally

buy on installment by getting a second mortgage on the house because you can get a second mortgage and pay 12 percent on the loan and on the installment plans you pay 18 percent for the loan. So we have people with a large amount of housing equity and they are monetizing that it seems to me is what is going on there. It is not a matter of tax writeoff, although that is, again, advantageous because if you increase the mortgage on the house it does not cost you more than the marginal rate, because they are deductible because those things tie in together.

I do not think I would put the major emphasis on the tax shelter aspect, though. There is no evidence I know of to examine that.

Mr. Ross. Can I pursue this a little bit? This behavior that is occurring is rational under the circumstances, I think we could agree on that, rational consumer behavior. My question, then, is that where the United States needs the investment to go? In other words, does the present incentive structure lead people to do the kinds of rational investing that the United States needs to occur to create the kind of future that we think we want to see created over the next 20 years, between now and the year 2000?

Mr. Juster. Well, again, one would like the surveys to get the answers. If what you are saying is investments are an outgrowth of productivity, that is quite right, it is. It certainly does something for the growth of real income and the growth of economic welfare. Naturally housing is a capital asset and a large amount of people spend their time in houses rather than at work, so it seems obvious that housing is a good place to invest. If you see the major problem as a lack of investment incentive in the business sector and the housing boom is generating higher costs by virtue of greater demands for money——

Mr. Ross. So there is a diversion?

Mr. Juster. Diverting money out of other forms of investments which you may judge on other criteria to be more pressing needs. If this would be your view, you would come to the conclusion that increased housing investments as spurred by inflation and rising prices is socially undesirable.

Mr. Ross. It is taking needed resources from plant and equipment——

Mr. Juster. Yes.

Mr. Ross [continuing]. To a rather artificially induced housing market?

Mr. Juster. Yes; although there is not a lot of evidence that anything is crowding out business investments. People have been saying that and you are saying that the housing sector——

Mr. Ross. I'm not sure.

Mr. Juster. I'm not sure, but it is not being crowded out.

Mr. Sheldon. Mr. Gaines, do you have a comment?

Mr. Gaines. Mr. Boulding had a remark on his prepared statement that answers the questions of the comparison of rates of interest and the rates of profit. In actual fact, real profit in industry is seriously depressed and is more than anything else holding the capital investments.

Mr. Ross. Yes; his section on the average rate of profit and the ownership of goods relative to the average rate of interest and the

34-880—78——15

ownership of loans, and I am trying to hone in on a special case of whether it is logical for the rational consumer to, in effect, own loans rather than own stock. So I guess the question to the committee, or the committee's staff, is what kinds of recommendations can you come up with to alter an already inplace incentive structure.

Mr. SHELDON. That will give us one more thing of many to look at when we get through this process.

Mr. WALLACE. Mr. Gaines, you closed your comments by recommending that the Government return toward a balanced budget—gradually, to be sure—but to at least make progress in that direction. However, Mr. Boulding, in his prepared statement, seems to warn against this, for fear it might create another depression like the 1930's.

The President's 1978 Economic Report on page 74 points to the State and local surpluses, the balance-of-payments deficits, and the shortfall in domestic investment as a reason for keeping the $50 billion budget deficit. And yet, the average person in the United States does not like budget deficits.

I think the Special Study on Economic Change needs to get into this question of deficits, and I would like to get your opinion as to the difference between what you are recommending; that is, returning toward a balanced budget and maintaining the current size of the deficit as recommended in the President's Economic Report.

Mr. GAINES. First, I think it depends upon the degree of emphasis a person puts on sustained economic growth and high unemployment versus controlling inflation. I put the greatest emphasis on the latter, so that I would be prepared to run risks on a long stagnation rather than a depression in order to get inflation out of the way.

One of the specifics of the CEA posture is the argument that a Federal deficit is needed to offset the State and local surpluses. I think this is an important point. The Federal budget is a single budget of both capital and current operating expenditures. State and local accounting practices separate operating budgets from capital budgets, so if you add them all together, there were no State and local surpluses, if you look at their budgets the same way as the Federal budget. In foreign trade last year we ran a deficit of some $30 billion and one way of looking at that is that what we are doing is importing products that, in turn, displaced American products, and that is a drain on our domestic income that should be replaced in one form or another. What Charlie Schultze is missing on this is it has already been replaced. Our $30 billion deficit on trade last year was more than credited, more than covered, by foreign purchases of U.S. Government securities. In other words, there was no capital being withdrawn to cover this deficit; there was no capital being withdrawn from the domestic market and the domestic financing of the Treasury was reduced proportionately. In effect, the economy was importing more than it was exporting, primarily oil but not exactly an exchange of products. But at the same time the Federal Government, through its net expenditures, was offsetting what the private sector was doing, so as I say, the $50 billion deficit with the Federal budget already takes account of the $30 billion trade deficit and more than take account of it. So I do not see really that a continuation of a high deficit is necessary. I would expect as the trade

deficit comes closer into balance, the Federal budget would come closer to balance so they offset.

The Council also said some tax relief was necessary to offset the built-in tax increases that occurred because of inflation. I am sympathetic to that approach, except it seems to me that it is like a dog chasing his tail. If you begin to justify a deficit in terms of what that tax deficit is in terms of creating tax revenues. Definitely I would prefer to see the tax increase occur as one means of reducing the stated deficit, and I believe we should move to bring these concepts into balance.

Mr. WALLACE. I have another question on monetary policy, but before I ask it, I would like to invite the Joint Economic Committee's economist, Tom Dernburg, to comment on this particular point if he desires. If not, I will go ahead.

Mr. DERNBURG. Not now.

Mr. WALLACE. Thank you.

The other day we had Mr. Minsky, Mr. Olsen, and Mr. Friedman all discussing the use of monetary policy in connection with the control of inflation. They all agreed that, in view of the nature of our current unemployment, with about half of it consisting of unskilled youths, and the fact that the economy had already produced 9 million new jobs since 1975, that we should not use monetary policy to increase employment any more than we already have. But suppose we turn that question around and ask whether, since unemployment has dropped to its current level, we should tighten money more than is currently being done in order to fight inflation? What effect would this have on investment? Since tightening money would raise interest rates and restrict the supply of credit, would this not inhibit investment, which is also needed to alleviate inflation and produce jobs?

Mr. GAINES. There obviously is a connection. In the first place, I do not have a simple solution for the Federal Reserve, but I am not at all sure that moving the Federal funds rate up a quarter of a point, which they have apparently done again, is the best and most efficient way to regulate the money supply. I think that perhaps more could be done through closer—let interest rates find their own level rather than be guided by the Federal Reserve. It might be more promising.

The question of higher interest rates: I do not like to use the term "crowding out private capital investment." There obviously is a relationship. For the corporation, if you decide to proceed with a plant or other type of expansion, it is necessary to see a stream of proceeds from that investment that will more than cover the current rate of interest which will have to be financed, whether they actually borrowed the money or took it from internal cash flow.

Only 13 years ago exactly, in July 1965, the Bell Telephone System sold a long-term debenture of 4¼ percent. Today the New York Telephone is selling an issue at roughly 9 percent. To justify the capital programs are being financed in these two cases it is necessary now to see a rate of return more than double what was necessary 13 years ago. And with each movement up in the market rates of interest, with the many pressures that corporate profits are under, each increase in the rate clearly has a deterring effect on capital spending.

But we have to concern ourselves with improving capital investment. It would be far better to look at the real operations of the com-

panies; in other words, to ask the questions why earnings are as low as they are, real earnings. What types of policy, if this is a public concern, what types of policies would be most likely to improve the real rate of return on capital rather than going into debt.

Mr. WALLACE. Thank you.

This is a long-term study, of course, and we are not looking at immediate issues so much. However, I would like to ask your opinion on monetary-fiscal year policy, the mix of macropolicies.

Take the current situation where unemployment is 6 percent, half of which is in the unskilled youth category. Would you tighten monetary policy and loosen fiscal policy or tighten fiscal policy and loosen monetary policy, or are they about right for the present situation?

Mr. GAINES. As I indicated in my remarks, I first would be most reluctant to do anything that would further increase the unified budget deficit. I might go so far as to agree with the proposition in lieu of a tax reduction for individuals. The scheduled increase in payroll taxes for January 1 might be considered to be moved back and have the same net effect.

I think monetary policy is quite right. I have high regard for Mr. Minsky, Mr. Friedman, and Mr. Olsen, but I am not disposed to criticizing the Federal Reserve for its inability to regulate the monetary stock as precisely as Milton Friedman suggests. Milton Friedman over the years has told them what to do and not how, so they are consciously trying to get control. But the state of the art is such that up to this point you could hardly do it. In other words, I would not change monetary policy in the direction of easy or tightening, but I would look to see if there is not a better way for them to achieve the target than through the interest rate way, then set a simple growth target in terms of a monetary base; and so if that does not do it——

Mr. WALLACE. I would like to have the other panelists join in. It should not be a two-way street.

Mr. Ross, do you have any comments on that?

Mr. ROSS. Let me make myself perfectly clear: I am not Mr. Boulding, so I will have to speak for me on this one. I am back to the theme of the question that I asked Mr. Juster. Your question went to the effects of investment on the tightening or the effect of tightening money supply on investment, and I come back to wondering whether the present incentive structure has led to, has created a dynamic that has led to real profit declines. Something seems to be in this present dynamic. Perhaps it is inflexibility, lack of downward ability to adjust. Perhaps economic controls.

I am just doing a study now on the effects of Government regulation on business and this is coming through loud and clear. That is encouraging activity that is undesirable to the overall economy. We do not seem to have in place any agency that is concerned with our overall economic health. There is no capacity in place that forces a consideration of each and every proposal and forces a consideration of that overall impact on the health of the business system.

So I think given that lack and given this dynamic that has been created, a dynamic that encourages a small investor to buy Swiss francs or to speculate in Swiss francs rather than to buy shares in the local company, or to buy houses rather than invest in the industrial base, I think somewhere in there there is a tremendous problem.

I am like many others; not so good at coming up with the solutions.

Perhaps if I can swing back to Mr. Juster's prepared statement, in his identifying——

Mr. WALLACE. Before you do that, if I could just complete this discussion on the budget then we can get back to that.

We were talking about the President's Economic Report, urging a continuation of the budgetary deficit in order to offset the balance-of-payments deficit, State and local surpluses and the shortfall in investment. I wanted to get the comments of the committee's economist, Mr. Tom Dernburg. Would you care to comment?

Mr. DERNBURG. Thank you, I would.

The State and local surplus in calendar year 1977 on a National Income and Product basis was in the neighborhood of $30 billion. That includes the purchases component of State and local spending and, therefore, includes those capital projects to which Mr. Gaines refers. It, therefore, seems to me that there is clearly a net drain resulting from those State and local surpluses that has to be offset in some fashion, one of which is a Federal deficit. Otherwise economic activity will shrink.

Second, although it is true that the current account deficit has been financed by inflows of foreign capital, those inflows represent purchases of financial assets, not goods and services; and for that reason there is once again a purchasing power drain that needs to be offset by a Federal deficit. So I do not think one can dismiss the deficit question as easily as Mr. Gaines has been doing. Thank you.

Mr. WALLACE. Well, I think we ought to invite all participants to add to their remarks. I know I caught you by surprise by bringing this up, so you are welcome to add to your remarks.

Mr. JUSTER. Let me comment briefly on the general issue.

I guess my feeling is that on the whole I have heard a lot of discussion about whether we ought to have a different monetary or fiscal policy and whether that would put the inflation rate down to where we would like and it comes out to if you push it very hard, that people seem to think you can get in a lot of trouble with inflation with poor fiscal monetary policy, but you cannot fix it except at a very high cost.

If you cut the rate of growth in the money supplies or do anything else which is a constraint on the macroside of the economy, the first thing that happens is you push the unemployment rate up from 6 to 8 or 9 percent, and after some very long period of time you begin to get some small perceptible impact on pricing; and what you are trying to get is an impact and trying to avoid the cost of going through that long painful wringer.

The fact of the matter is inflation is an asymmetrical process. Everybody has expectations of contract price increases, whether wages or whatever, in the neighborhood of 6 to 8 percent, and nobody does anything on the policy side, which suggests that the word is going to be—if it is 6 to 8 percent, nobody actually does anything about creating a different kind of environment, so my feeling is, and I think it is widely shared by a lot of economics professionals, is that you really are not going to be able to make significant headway without cost, and we have simply got to be inventive about it.

The place to start is to reduce what one of my colleagues has called the self-inflicted inflation the Government has imposed on itself.

There is a long history of things which represent Government action which have tended to push up gently the payrolls. There are the agriculture price supports, trade barriers. There is a list of about 25 or 30 or maybe 50. Sure, everyone says we will do something about it, but it never, it seems to me, gets done.

It seems to us that you have to attempt to tackle the inflation problem by changing the cast of the expectations that people hold by making it clear that there are policies in place which are designed to chip away and reduce the inflation rate that will have a cumulative impact and may make it possible to avoid the credit incision or 8-percent inflation without having to go the route of pressing on the monetary side of the fiscal policy side.

You will eventually, if you are patient enough, make some progress, but the body politic will not put up with 8-percent unemployment rates while you are waiting for something else good to happen. And all that will result is you produce a modest or a severe recession, but you will not see any impact on the inflation rate, and in that sense I think the discussions in this vein of what can you do with fiscal and monetary policy, my own feeling is that there is very little that you can do that is acceptable on the fiscal and monetary policy side.

Mr. WALLACE. Thank you, Mr. Juster. You have just posed one of the basic dilemmas which confronts the country, and one of the reasons for the study is to look into what, if anything, can be done. But let us assume you are right and nothing basically can be done. The Congress will go ahead and keep implementing minimum wage legislation, farm price supports, and so forth. What is the answer?

To continue to live with inflation? Do we then go to some form of indexing, as Milton Friedman has suggested? What about indexing? I would like to ask the panelists about that.

Mr. GAINES. I am in almost total agreement with what Mr. Juster said. To emphasize that the only road is a set of consistent Government policies to gradually turn inflation expectations.

Second, I would be very—I have been encouraged by the Council on Wage and Price Stability and the movement in the direction of identifying those types of government—by the way, EPA and OSHA requirements are important ones—to see if we are getting enough back to justify the inflationary impact.

I forgot the question.

Mr. WALLACE. In view of the fact we do not seem to be able to deal with inflation for fear of causing a depression, whether we should not simply accept inflation and use indexing so that everybody's income rises in accordance with the consumer price index. I think Brazil has had this kind of experience and used indexing. Professor Friedman at the University of Chicago has advocated tax indexing and I think also general indexing to adjust for inflation, and I wonder what would be the effects of such an approach.

Mr. GAINES. First, the U.S. economy is much more highly indexed already than most people are aware of. If not all, most business contracts that extend for a year or longer have an index provision. Government employment is indexed, and so forth.

Now, as to whether or not this is the way to go, there is one stumbling block that people cannot deal with and that is how you provide for the huge body of fixed claims in the financial system. In other words, how

do you apply for the life insurance contracts with outstanding private pension funds? Social security is indexed, but private funds cannot be indexed. In other words, how do we deal with the hundreds of billions of dollars of fixed claims already outstanding? Granted that with future fixed claims you could use the indexing principle, although it would be complicated.

In the second case, the countries that have it—and by the way, our country and all the others are progressive income systems and that is a form of indexing you might say. I agree completely with the idea of indexing personal income taxes. But now on broad indexing such as in Brazil I will point out that Brazil is a military dictatorship. It has been possible for the military leaders of Brazil to hold the real rate of wage increases below the rate of price inflation for a decade. In a democratic government I doubt that that would be possible. I do not know of a successful indexing on a broad scale in any of the democratic countries, so I doubt it would work short of a totalitarian system.

Mr. WALLACE. We have difficulties now. You mentioned wage contracts, but only about 20 or 25 percent of our work force is organized and subject to escalator contracts; whereas, over 75 million workers do not have their incomes tied to a consumer price index. Millions of people on private corporation pensions are not indexed, so what we get is a skewed effect. The incomes of some people rise right along with the inflation, but others suffer badly. If we do nothing to counteract inflation, we will have more and more of these injustices, which is why I raise the question of general indexing. What do you think, Mr. Ross?

Mr. ROSS. What is coming through in my studies is the cumulative impact of activity on the business system. Many little things add up to a big thing. Many little inflexible regulations add up to a cumulative point. There is no single regulation that causes business a lot of problems, but there are 123 regulators and all of their regulations are starting to cause an overall bind.

If inflation is expectation-oriented, then I think the Government must be perceived to be working at many small things which are adding up to the big thing rather than just playing back and forth between fiscal and monetary policies.

Again, to come back to Mr. Juster's prepared statement, I find myself as I go around in substantial agreement with both Mr. Gaines and Mr. Juster here. But Mr. Juster's point, though, on the difference between consumers' perceptions and the realities of the impact of inflation on consumers, based on his time-series data, I think was really the key, and I am wondering whether or not, given this perception, given the fact that there seems to be no very systematic consideration on the part of the Government of all of these little impacts, whether the consumer sees this kind of thing happening or not happening; I am wondering whether or not this will—well, they have it seems a misperception of the real effect of inflation on them, the consumer. Will this real misperception cause them to also misperceive the real deep and underlying nature of the difficulties in the economy?

In other words, they will want just little changes on the surface rather than be willing to accept bigger changes with respect to environmental policies, energy policies, and population policies.

When you get to playing with perceptual data you get realities and perceptions and the differences and problems like that, but what I am having trouble with is will the public be unwilling to go to a deeper and real solution, given their misperception of the effect of inflation on that, because if I read Mr. Juster's reading correctly, then he has said inflation has not hurt the consumer all that much.

First of all, is that correct? And second, what do you think of my question? Can you respond to my question?

Mr. JUSTER. Well, I think it is true that inflation has not hurt consumers as much as they perceive it to have hurt them, because they clearly perceive that the last 4 or 5 years have resulted in negative real income increases, which as a generalization will not hold, has not been characteristic of the last 4 or 5 years. It occurred in 1974, but over the period of time we are talking about there has been a positive rate of increase in income; and consumers reported on the whole they saw themselves as falling behind. So it is true that inflation, in fact, does somewhat less damage. It is also true, however, that inflation has some very real costs to consumers, which I guess I would categorize mainly in the context of making it impossible to plan a financial life in a way that makes it comfortable as they have perceived.

In that sense there are real costs, although I think consumers systematically misperceive the impacts on the whole of inflation on their real income.

On the indexing, it is attractive in many ways because if you could have effective inflation indexing it does you good because the cost of living index gets reflected in the wage increases and that sort of pulls that up. It especially cuts back the costs on the way down as well as speeding them up on the way up. So it is not necessarily a guarantee of permanent and higher rates of inflation. It can work for you because if you are indexing and price increases slow down and wage increases slow down, that speeds up this process more rapidly than otherwise would be true. So it does not guarantee to speed up and accelerate inflation. It would also be attractive in that it would tend to reduce uncertainty, which people feel about the balance between their money wage increases and price increases.

But there are some problems, and I am not sure they are soluble. You could not make a total—you have to have a class of losers on an indexing system. To the ones who are not indexed you add whoever the losers are now. There would be a different group, and I am not sure whether it is better or worse to have the present set of losers and another set which might be different.

Most importantly, however, I do not see really how in our society you would implement it. How is the Federal Government going to tell the University of Michigan that it must raise its salaries 6.8 percent. Are they going to give them the funds? I doubt it. I think they can see it would be a good thing, and they could work with the Government's own employees. But how is the Government going to tell a business firm or tell a university or tell anybody else except its own agencies that they must increase salaries because that is what the inflation rate was. Where does the money come from? I do not understand how it is expected to operate. I think it is kind of a moral suasion, but that is very little given what, in fact, takes place.

I think Mr. Gaines is quite correct, we are now widely indexed. But I do not see how you would institutionalize it. Where are the powers to enforce and where are the resources to enforce such a system. I do not see how that would take place.

Mr. DERNBURG. I would like to follow that up with a question. The interesting point has been raised that conceivably indexing of some sort or other could mean the winding down of inflation rather than the opposite as is usually assumed. So I was wondering about some specific indexing areas where this might be the case, and I welcome the comments of the panel on this.

For example, suppose that the system of replacement cost accounting were put into effect for purposes of corporate taxation. That might stimulate the rate of capital formation. That would hopefully lead to productivity gains and possibly to some beneficial inflation effects.

It has also been suggested that if consumers were protected from inflation of their personal income tax rates, that this might alleviate wage pressure. So there is some possibility that indexing measures might actually slow the rate of inflation.

Would you be willing to comment on that?

Mr. GAINES. Obviously, indexing can be proinflationary or anti-inflationary, as Mr. Juster has pointed out. I think that in an essentially stable economy in which inflation has been brought down to a tolerable level you might have an opportunity to move to a more generalized index. But I would certainly hesitate to move in that direction at the time when the outlook of inflation is as unhappy as it is at the present time.

Yes, indexing can be either proinflationary or anti-inflationary. If it is pro, it becomes a game of Russian roulette if you move in that direction; if you are in a period when indexing is proinflationary, you could find yourself in a devil of a vicious spiral with almost no solution in sight. I agree with the up-and-down side, but I think it would be too great a risk at this time.

Mr. DERNBURG. What about the specific areas; personal income taxes?

Mr. GAINES. For personal income taxes I would like to see indexing simply because of the inequities of the present tax structure. It is quite one thing to have to pay higher taxes because of an inflated increase in your income, but quite another thing to still pay higher taxes because you are in a higher tax bracket. So I would like to see that adjusted for.

In most product lines I do not think it is feasible. In public employment it is feasible and pretty generally acceptable. Do you have any specific one?

Mr. DERNBURG. Yes. Particularly corporate depreciation accounting.

Mr. GAINES. Yes, depreciation. I have proposed to a couple agencies that we do what France has done on two occasions since the Second World War. That is grant a one-time opportunity to industry to revalue its plant and equipment and current replacement cost and claim depreciation against that cost. I think this would probably be more useful in encouraging greater capital investment by generating more cash flow than anything else that could be done. But I have

one reservation and it could be a very important one. If it were necessary, for pure accounting terms, for corporations to change the values that they carry on their books, we might find a number of corporations that would go into bankruptcy and be unable to use the greater depreciation amounts. So I think it is an important consideration, but moving in this direction has merit, I think.

Mr. JUSTER. In general I agree with the proposition. It is not clear to me that indexing could have a direct impact. I do see one general kind of problem that has taken place so far with even more widespread indexing. The best illustration is what appears to be a description of inflation after 1974 and 1975. Wage settlements did reflect increasing living costs, but the empirical evidence that I have heard discussed seems to suggest that people, in general, did not build into wage settlements those special, one-shot increases in fuel and food and other kinds of prices. They were by bargaining agreement excluded.

If you ask yourself could you have indexed that, the answer is in a technical sense no, you cannot index a real loss. It implies that no one is worse off as a consequence of inflation, but as happened in 1974, the real income as a whole was lower than 1973. There is no way to protect against that by indexing because by changing numbers you cannot get back the loss. Attempts to index it would probably generate and endless upward spiral toward infinity.

There may be a basic problem with attempting to do widespread indexing. There are some situations where you do not want to index because you have losses across the whole society which someone has to bear. If there is a loss, it has got to be shared somehow. You cannot index it out. You can make the losers lose more or make people, put them in a situation where they attempt to avoid loss, but this results in cumulative impacts of a sort that are quite silly. So I expect there are occasions when indexing is undesirable for one-shot highly visible things which would not get into wage contracts.

Mr. SHELDON. Mr. Bradford.

Mr. BRADFORD. I think that we do not want to fight inflation in such a way as to bring about the catastrophic effects of the Great Depression. Do the answers lie on the supply side; provide incentives for pushing up productivity growth. In that scenario, profits would rise, employment would not be as serious and investment would rise. It is a lot easier to fight inflation during a period of economic growth than during recession. Do you think that this is the acceptable way to return to stable pricing? We have spent many years on the demand side. Is it time to look at the supply side through increased investment and tax policies, even if it means tax reductions to do it?

I do not know who to ask—Mr. Gaines, Mr. Juster.

Mr. GAINES. You are quite right, we the last many years debating how to regulate the demand side of inflation, both to encourage continuous growth and more recently to discourage inflation. Maybe it is time for more emphasis on the supply side.

The economists know less about how to do that because we have been having those rather obvious things such as inflation accounting or index depreciation allowances which could cut corporate taxes, provide incentives to encourage industrial development in areas we think the chances of productivity improvement are best—they prob-

ably have well-constructed analyses—but I am not aware so I could not come up with a good description.

Mr. JUSTER. I think I agree with that generally, and I must say if you look at the numbers, it is very difficult for me to imagine you can get sufficient productivity gains to have that rest as the main way in which you intend to get down inflation. You are talking about 6-percent inflation rate, and productivity growth rate in recent years was 1½ percent and used to be 2½ percent, the best you could do. If you look carefully you might be able to invent ways to overcome the productivity slowdown and get back in a longer term 2½ percent we had before. But you want to get that 6, 7, or 8 percent down to 2 or 3 percent, and productivity gains, however desirable they are, are not going to solve the inflation problem. So I would take the view that worrying about the supply side is important for this committee, but I do not think I would regard it as a probable cure for the inflation problem. It will help some, and the only way to solve the inflation problem is to recognize that there is no sort of great giant idea which you will know as soon as you see it. It won't happen that way. There are a series of things which you can do cumulatively that might have an impact.

I also entirely agree with Mr. Gaines when he says that it is very well to pose that question about what do the economists know about the supply side as compared to the demand side. I feel not very much. We know little enough about the demand side and I would say almost nothing at all about the supply side.

Mr. BRADFORD. Do you think it is worth looking at?

Mr. GAINES. Yes, but independent of any inflation. It is worth while to try to invent ways of more rapid real income growth.

Mr. BRADFORD. One other question, Mr. Juster. Compound interest and inflation are difficult mathematical concepts to grasp. Do you think the average working man with a high school education understands the impact of inflation, what the impact is on the home value, savings, or pension funds?

I was interested in Mr. Boulding's prepared statement where he said: "At the relatively modest rate of 5-percent per annum, the price level increases 100 times in 94 years, 1,000 times in 141 years."

That means that a $100,000 home will cost my great-grandchildren $10 million, and these are frightening figures. Do you think they understand?

Mr. JUSTER. They are not really frightened with that home. You will have a $2 million annual salary. The relationship is not changed by that compound mathematics. I do not think people in general, if you have inflation double in 12 years, I think people do not in general really know because they do not generally make those kinds of calculations and they do not really have much impact on what people do or how they think about it. And I do not really think that that kind of arithmetic necessarily implies social disaster. People are uncomfortable with inflation rates of the sort we have now, and that is not just the consumers; it makes things difficult in the business world. Everybody may have strong preferences for seeing it lower, but I do not think it is because the denomination or kind of prices you pay is different by a factor of 10 after 50 years. That is not the problem. The problem is that it makes it more difficult to make sensible decisions.

Another problem is it may tend to reward people for things that you do not necessarily want to give them. Rewards for, as someone, I think Mr. Ross, suggested, an inflation environment is one which rewards the person who can move quickly and act rapidly. He is the one who is going to do well in the inflation environment. Those prices on which one trades will be changing rapidly and he will be the guy who can capitalize.

I do not think they know about this; if they did know it, I do not think they would care or do much about it; and I do think there are very strong reasons why it is highly desirable and worth paying some price to get inflation rates down to the point where people can plan sensibly and not have to concern themselves with trying to outguess where to put their assets and outguess other things. There are real social costs.

Mr. SHELDON. We are very pleased, indeed, that Professor Boulding has been able to join us. Our morning would not have been complete. I do not mean in just any mechanical sense, because everyone has regarded it as a great treat that you were willing to come. We are sorry you were delayed.

As you already have discovered, Mr. Ross was good enough to read your statement for you, and you have heard just a little bit of the discussion so you know the general direction in which we are going.

Let me read into the record a little more of an introduction for Professor Boulding. He is a program director of the Institute of Behavioral Science at the University of Colorado, Boulder, Colo.

He is the author of a textbook entitled "Economic Analysis" in 1941, and a past president of the American Economic Association. Professor Boulding brings to the study of economics an incomparable breadth and vision. He has made notable contributions to the study of the evolution of social systems and of how market exchange can be modified in the interest of social integration. A graduate of Oxford University, he has taught in the United States at Fisk University, at Iowa State University, and for 18 years at the University of Michigan. He has been professor of economics and a program director of the Institute of Behavioral Science at the University of Colorado since 1967.

If you will, take over from here and in any way you would like. We would appreciate it very much, Professor.

Mr. BOULDING. Thank you. I apologize for being so late. I flew overnight last night from Denver. The plane refused to land in Dulles Airport and went on to Philadelphia.

Then we were brought into Dulles again on the bus. So if I sound a little bedraggled, I am. I certainly appreciate the invitation tremendously.

I think you are wrestling with an enormously difficult problem. In a certain sense, we can see the inflation problem rising out of the fact that everybody wants more than there is. A fundamental principle of economics is that you cannot have more than there is, and a fundamental principle of psychology seems to be that people want more than there is. So we get caught on this dilemma; and how one can arouse the general public to its implications is an extraordinarily difficult problem.

Part of the difficulty is due to economists themselves. We have persuaded the last generation that budget deficits are wonderful; but they have not been wholly successful. Perhaps a little return to puritanism, or something like that, might be in order.

But there is a very deep underlying idea that the reason why we get inflation so easily is that we are more afraid of unemployment than of inflation, probably wisely, for in a choice between the devil and the deep blue sea, there is something to be said for the deep blue sea.

The part of the problem which I think we have not solved is whether we can intervene in the labor market, particularly at the microlevel—the level of the real job and the real person—in such a way that will take the pressure of the system for the general inflation. This is why I emphasized in the prepared statement, the very important but neglected problem of the gap between interest and profits, which we are suffering from now. The problem is how on earth can you recontract these enormously complex individual contracts in regard to interest and debt? I do not know the answers.

The difficulty is that the price level that we talk about is an abstraction. The reality is the price of cheese and butter in particular stores. There are hundreds of millions of these and millions of individual wages. All the realities are retail, and the policies wholesale; how then do we translate the overall policy into the individual realities?

Mr. SHELDON. Recognizing that Professor Boulding has been through a trying period of hours in order to get here, we do not want to overwhelm him with too many surprises. But if there are some specific questions that anyone around the table has been saving up in hopes that he could join us, here is the chance.

Mr. DERNBURG. In your prepared statement, you speak very disparagingly about monetary policy in the United States. Would you care to elaborate? What has been the trouble? What should be done?

Mr. BOULDING. Monetary policy would be wonderful if you could have it. The difficulty is, as always, that policy is at a very wholesale level, but the reality is some individual person asking for a loan from a bank. The real difficulty is that the debt structure extends over time and the main body of the structure is a part of the past, and one of the things that is hard to have a policy about is the past. Policy can only be about the future. We have all the legacy of the past, but a policy can only apply to the ongoing, and I would not be very optimistic about it, as I shrink away from renegotiating the past.

This is an enormously difficult problem. The awful thing you run into sometimes is that some questions are unanswerable and this is humiliating—and certainly renegotiating the past is that way. Then the question becomes, perhaps, how can you have a revolution of falling expectations? So you want an atmosphere with which you put up with certain things instead of solving all problems. That I worry about.

Mr. SHELDON. I must say that I immediately picked up one thing that you said and felt a certain relief. You indicated that maybe there are certain questions that do not have answers. There have been some people who have hoped that the Special Study on Economic Change would really provide answers, and there are days when those who are working on it feel rather desperate. And perhaps we can take

consolation that it may not be a personal failure on the part of all of those who are engaging in preparing papers and doing analyses if we end up with some holes.

Are there any other questions for Professor Boulding?

I am sure that if Chairman Bolling were able to break away from the Rules Committee—and he has sent a message that he cannot get back—he would have some kind of valedictory to end these 13 days of public panel meetings. I am not going to try to emulate what he would say with anything that is very profound or very inspiring. But I certainly feel that it is appropriate for me to express in behalf of the Special Study on Economic Change staff the cooperation that we have had from both the regular staff of the Joint Economic Committee and from the Congressional Research Service, and above all, to thank the many panelists who have taken time to come from all over the country to join us in these meetings. I think that everyone will be interested in the number of comments we have had in private from people who have had the opportunity to attend some of these meetings, saying that they have found them illuminating and helpful and constructive.

A few of you may have been here when Senator Sparkman said that in 32 years of going to meetings of the Joint Economic Committee, he had found the particular panel he attended the most enlightening and instructive in all of that time.

I have certainly found this morning's panel a very good one. I am sure my colleagues have, too.

We would have been delighted had you been able to get here earlier, Professor Boulding, but that was beyond your control. But it has been a very nice climax for us to get to the end of these 13 days with your closing message, and for me somewhat reassuring.

Thank you very much. This now does conclude this round of hearings and panel meetings for the Special Study on Economic Change. The Joint Economic Committee will be going ahead with its regular midyear hearings starting next week on the 28th, and a fresh team will take over at that time. Now we close.

[Whereupon, at 12:35 p.m., the committee adjourned, subject to the call of the Chair.]